

Roddiscraft HARDWOOD PLYWOOD

WANTED in 252,000 Rooms

In the residence units estimated to be built in 1950 there will be a minimum of 252,000 wood paneled rooms, according to a recent survey of home builders' plans.

Roddiscraft-producer of the best in hardwood plywoods-can furnish all your plywood needs. All standard domestic and foreign hardwoods are carried in stock in Roddiscraft's coastto-coast chain of warehouses.

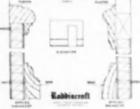
Many unusual types of hardwoods are available on special order from Roddiscraft. Tell your Roddiscraft representative you want to see the Roddiscraft Sample Book, showing actual samples of fifty-one different types of face veneers.

For quality, for quantity, for availability - Roddiscraft is your best source of hardwood plywoods.



Controllege 20, Mana, 229 Values 6, Les Anapeles 11, Calit, 2048 E. San Ville Combridge 20, Mana, 229 Values 6, Les Anapeles 11, Calit, 2048 E. San Ville Charage 20, Li 2664 W. 414 5, Marshfield 10, Ry. (201-3), Lins 5, Charage 20, Li 2664 W. 414 5, Marshfield W., Litz 7, Palmare M., Charage 20, Li 2664 W. 414 5, Marshfield W., Litz 7, Palmare M., Charage 20, Li 2664 W. 414 5, Marshfield W., Li 20, Palmare M., Dahasi 10, Renze, 2000 Marshl 3, M. Harawakes 8, Will, 4401 W. Stare 5, Dahasi 10, Renze, 2000 Marshl 3, Marshfield W., 2010 L. (2016), Dahasi 10, Renze 7, 2010 L. (2016), R. V. Dahasi 10, Renze 7, 10, Dahasi 10, Marsh 39, Bastan 10, Renze 3, 513 Santhe San Marsheim, Pal, Palladelphilth, P., Kei 7, N. Dahasi M. Bastan 10, Li City, N. Y. Baslew 2016, San Anapeles 24, Cal. 345 Williams Ann.

Roddiscraft RODDIS PLYWOOD CORPORATION MARSHFIELD. WISCONSIN



Large detail drawings of this item and other wareauting browth showing approval installa-tion methods are available on regionst. Write for waleacoting layout charts Nos. 10-15.

A NEW SUPER WINDOW UNIT No trimming...it's already completely trimmed inside

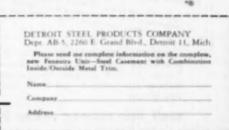
and outside

ALL YOU DO:





WINDOWS . DOORS . PANELS



Published monthly by Simmony-Boardman Publishing Corporation, 79 W. Monroe St., Chicago J, Ill. Subscription price, United States, Poisensions and Canadar. 1 year, \$3.00, 11 years, \$5.00, Foreign countries: 1 year, \$10.00, 3 years, \$20.00 Single copies, 50 cents. Entered as second-class matter May 21, 1948, at the Foot Office of Chicago, Illinois, veder the act of March 5, 1879, with additional vedra as second-class matter at Musual Marria, Illinois and significant for second-class reentry for Britoli, Conservicent pending. Address communications to 79 W. Monroe St., Chicago 3, Illinois.

FENESTRA'S NEW COMPLETE UNIT:

One man can easily install this new, completely trimmed unit in a few minutes . . . using only hammer and nails.

Your carpenter prepares all openings alike for frame or brick veneer. Runs sheathing right over stud and cripple and saws it off flush. Plaster or dry wall butts against metal trim inside. Shingles, siding, stucco or brick butt against it outside. No finished work required inside or out.

The integral flashing saves time ..., makes the window weathertight. There's a "pocket" in the inside trim, for Venetian blinds and shades ..., no need for blocking.

Neat and modern, simple to clean and screen from inside the room, always easy to open, Fenestra Windows will add real sales appeal to your homes.

And since the trim is galvanized and Bonderized, with a bakedon coat of prime-paint-you have a strong sales point in low maintenance. Head and jamb members are 18 gage, sill 16 gage for extra strength.

Check on these new units right away. For types and sizes call your nearest Fenestra salesman (listed in your Yellow Telephone Directory) today-he's an experienced representative of America's oldest and largest Steel Window Manufacturer. Or mail coupon.

Another Outstanding Lumber Dealer

G. E. CARTER owner, Builder's Lumber Co., Port Arthur, Texas

tells of beauty and dura**bility of UPSON PANELS** in his own home

"I have sold Upson Panels for over 25 years to satisfied customers.

"Several years ago I applied them to the walls and ceilings of my home, 2114 Sixth Street in Port Arthur, Texas. Both my wife and I were delighted with the rich quality and character which these panels produce.

"Today, the panels look just as good as when they were first applied. I don't think they will ever need repairing, beyond an occasional coat of paint."

> Corponters: There are jobs waiting for men skilled in the application of Upson Panels. Lumber Dealers everywhere endorse this product-use it in their

mail this coupon today

own homes.

UPSON PANELS

THE UPSON COMPANY 415 Upson Point, Lockport, New York

I am interested in knowing more about Upnon Strong-Hilt Panele for new construction Upnon Kuwer-Krak Panele for re-covering cracked cellings. Hend nm your booklet "New Interiors For Obd" and Instruction Shorta.

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AMERICAN BUILDER



IN THE JUNE ISSUE

A report on coment and its uses in the light construction industry. Portland coment is a vital structural part of every permanent building. In the June issue, American Builder will explore specific uses of cement, concrete, and concrete products. On-the-job stories and technical information will provide helpful building aids.

READ

How aggregate sizes and gradings affect the economic and structural aspects of concrete.



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Volume 72

MAY, 1950

Number 5

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UNIVERSAL DRAMATIC! NEW! Here's a different kind of range to

our kitchens "se



BUALITY AND VALLAND

Since 1842

REASONS

"CONVENIENCE-LEVEL" cooking! Here's the one feature warmen want most in a range...everything at the "Convenience-Level." Now you can give your buyer a range with the oven or cooking units at any desired height. "Convenience-Level" cooking eliminates stooping and bending. It's unique and only Universal Selecta-Range has it. It's something every woman wants!



LARGER WORK AREAS! Space-saving Select-a-Range design lets you build the oven in a wall or install it in a cabinet. Makes more counter area available for much needed extra work space where space is at a premium. It's the ideal solution for small home kitchens, providing greater design flexibility and freedom. It's something every woman wants!

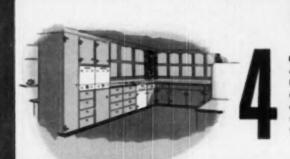
MORE STORAGE SPACE! Exclusive Select-a-Range design provides up to three times more storage drawer capacity than a conventional range in the same floor area. Extra drawers in matching design are right at the range where every woman wants them for all her utensils, cutlery and housewares. Saves steps...saves work. It's something every woman wants!

Centennial Anniversary Presentation

houses when you install the revolutions

lect-a-Range

EXCLUSIVE! pack more sales appeal in kitchens!



GREATER BEAUTY AND EYE APPEAL! Selecta-Range gives your kitchens that "modern as tomorrow"

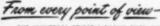
look at low cast. Built-in or peninsular arrangements now widely publicized in national magazines have extra appeal that sells the whole kitchen easier. Here's something new and different for your kitchens. It's something every woman wants!



NEW VERSATILITY for houses of every price range! There's a Select-a-Range for every house plan ... low cost economy arrangements ... as well as many other larger variations for higher-priced and "custombuilt" houses. And every Select-a-Range has all the most advanced features of electric, automatic cooking. It's something every woman wants!

COMPLETE FLEXIBILITY! 3 basic units give you over 25 Select-a-Range variations to provide the widest possible choice of range designs. And Select-a-Range flexibility gives you new freedom to design your kitchens as you want them ... impossible to attain with the rigid dimensions of conventional ranges. Here's more sales power for you at low cast!





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THE UNIVERSAL SELECT & RANGE PUTS MORE SALES APPEAL IN KITCHERS ... AND IT'S THE MOST WIDELY PUBLICIZED AND ADVERTISED RANGE IN AMERICA TODAY!

MORE for your money, in MENGEL Hollow-Core Flush DOORS!

Installation and finishing expense leads most builders to demand the extra beauty, durability, economy and *salis appeal* of Mengel Hollow-Core Flush Doors.

- Balaward seven-ply construction to provide controlled reaction in changing weather conditions.
- 2 Hardwood construction throughout stronger, more durable, free from grain-taising, more easily and economically finished.
- 3 Exclusive Insulok grid core material has inherent resiliency, cannot cause warping, nor transfer grid pattern to faces.
- 4 Gteater strength. Adequate core stock surface area provides maximum gluing surface and resistance to warpage.
- 5 Precision key-locked dove-tailed joinings of stiles and rails add strength and stability.
- Ready to finish. Door faces are smoothly belt-sanded. Sules are machine-planed at factory — prefit to standard book sizes.
- 7 Fully guaranteed. Each door must meet rigid quality control standards and constant inspection throughout manufacture.
- 8 Mengel Hardwood Flush Doors are economical no mouldings to paint — no corners to collect dirt. Smooth hardwood surfaces are less absorbent and less costly to finish — easier to clean and longer-lived.

Write for complete specifications. Use the convenient coupon.

Also see — MENGEL STABILIZED SOLID-CORE DOORS the finest products of their type on the market:



The Mengel Co., Plywood Division 2308 South Fourth Street, Louisville, Ky.

Name

City

State

AMERICAN BUILDER

Publisher's Page



Am I My Brother's Keeper?

THE Hearst papers' business columnist, M. S. Rukeyser, not long ago observed that "the modern corporation has become a cooperative social institution," not interested exclusively in making a dollar, if possible, for the stockholders, but also seeking to contribute something to community welfare. He quoted an economist for the Standard Oil Co. (N.J.) who upheld the same theme, namely that the interests of the owners of business cannot be advanced, in the long run, unless due account is taken of business' responsibility for the welfare of the whole community.

Along the same general line, several years ago, the General Motors Corporation employed a social scientist to report to it on how well it was carrying out its obligation to be a good citizen and a good neighbor. That is, in looking after the interest of its stockholders, was the company at the same time adding to or subtracting from the welfare of everybody else?

Several manufacturers have shown sufficient sense of stewardship for the kind of political and economic system which has made America great to be willing to devote some of the advertising space which they purchase, not just to advancing the sale of their products, but also to educational information in defense of the American political and economic system. A specific example of this endeavor was afforded in the February issue of American Builder, in the advertisement of the Ceco Steel Products Corporation.

One of the most noteworthy instances of this sense of stewardship for the general welfare by an individual corporation occurred recently in a public statement by a vice-president of the Westinghouse Electric Corporation, in which he defended the country's system of privately operated railroads; and set forth a program to remove some of the political handicaps which bedevil this industry and confront it with the threat of socialization. Coming from a railroad executive, such a statement would probably have been discounted as selfserving propaganda. Coming as it did from a great corporation with no immediate interest at stake, the expression could not fail to carry a great deal more conviction.

All of which raises the questionwhen those of us who oppose socialism in principle are carrying on educational efforts in support of our beliefs, are we not more effective when we complain against socializing the other fellow," than when we limit our objections to the socialistic invasion of our own business? We establish a system of police protection to defend our neighbors against robbery, knowing that the system will also protect us if we are attacked. This is surely a more effective method of defense than one in which each citizen would be expected to defend himself against thieves, getting no help from his neighbors. If this mutual-aid system is applicable to protection against theft, why not to protection against socialization—which is simply robbery under a politer name?

Some of our states are designated as "commonwealths"-a term which can be easily misinterpreted to suggest the ownership of all wealth in common. What this word really means, though, is "common welfare." That is, the "commonwealth" concerns itself with those things, and only those things, in which everybody has an interest-such as discouraging crime or repelling a foreign invader. It is to my advantage that theft and murder be punished not just when they are practiced against me, but when my neighbor is the victim, because unless these crimes are put down, nobody's property or life, including my own, is safe. If I do not oppose socialization or communization when the other fellow" is the victim, then I accept them in principle; and my failure to object gives them some legitimacy and acceptance. They thrive so that, one of these days, they can be applied to me

There is no moral difference between making no complaint while one's neighbor is being socialized, and remaining silent while he is being robbed or murdered. In a community, we are all members one of another, as it was written long ago.

James G. Lyne

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Here's what the men who use ATLAS MORTAR say:

"In my 30 years as a brick mason I have never seen a prepared masonry cement that works as well as Atlas Mortar."*



"Smooth as silk"^e Masons like the smooth, easy response to the trowel of buttery, plastic Atlas Mortar.



"True, tight joints"* The outstanding durability of Atlas Mortar is proved by rigid laboratory tests.



"Excellent appearance"* Contractors appreciate the excellent appearance, color and strength of Atlas Mortar. * Actual quotations from reports of masons and contractors who use Atlas Mortar Cement.

... and these are but typical. We are constantly receiving such reports, praising the outstanding workability, appearance and durability of Atlas Mortar. Try it yourself!

Backed by years of research, Atlas Mortar Cement complies with ASTM and Federal Specifications for masonry cement. For further information, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysfer Building, New York 17, N, Y.

OFFICES: Albany + Birminghom + Bestan + Chicago + Dayton + Konsas City Bitemespalis + New York + Philodelphia + Pillsbergh + St. Louis + Ware.



"THE THEATRE GUILD ON THE AIR"-Sponsored by U. S. Steel Subsidiaries-Sunday Evenings-NBC Network 10 AMERICAN BUILDER

CRANE the preferred plumbing

The Crane Oxford Closet offers highest quality below the top price range. An excellent choice for most homes ... and for the better apartments, resorts, motels, etc. Matching lavatory and bath. Consult your Crane Branch or Crane Wholesaler.

CRANE

MAY 1950

CRANE CO., GENERAL OFFICES 836 S. MICHIGAN AVE., CHICAGO S PLUMBING AND HEATING -VALVES - FITTINGS - PIPE

Here's how to start



This St. Louis sales riot is not an unusual event. Rather, it is the typical success pattern of builders all over the country. From Maryland, Colorado, New York and other sections come similar enthusiastic reports of builders who install General Electric Kitchens. Why not let General Electric help sell your houses faster, too?

General Electric offers you all this :

- Tested merchandising programs that have helped so many other builders enjoy phenomenal sales results.
- The brand of electrical appliances that people prefer to all others.
- Assistance in designing and improving kitch-

en layouts for your houses.

- One source of supply for matched equipment
 ... a full line of cabinets and appliances.
- And most important: G-E equipment is world-famous for its dependability! Remember, you can put your confidence in G-E!

a sales riot!

"Rather than spend money to sell our houses, we installed complete General Electric Kitchens so that people would buy. Result: We sold 109 houses the very first day!"

Mr. N. R. SCHUERMANN of Schuermann Building & Realty Co., St. Louis, Missouri

Today, more than ever, people want houses that include all-electric living.

They want *low-priced* homes that have kitchens in which dishes are washed and double-rinsed automatically-where there's a Disposall® for food waste.

They want plenty of hot water at all times . . . and they want an electric range that takes the trouble and guesswork out of cooking, and a family-size refrigerator.

What Schuermann did

The Schuermann Building and Realty Company offered the people of St. Louis, Mo., that kind of a house for the full price of \$8995... with less than \$1000 down!

You can see from the photograph at the left what happened. Hundreds of people were waiting to enter the General Electric equipped house at 10:00 a.m. More than 7000 people came out

As little as \$4.80 more a month!

You can include General Electric Kitchens in your houses for as little as \$4.30 a month extra when the G-E "Kitchen Package" is included in the long-term realty mortgage.

Furthermore, the slight increase in monthly payments may be offset by the economical operation, low maintenance and long life of General Electric appliances! to see the Schuermann home on opening day, 109 people bought houses the very first day!

A suggestion for you

We would like to work hand-in-hand with you to achieve similar results for you in your area. We can help you pre-sell your houses just as we have for so many other builders throughout the United States.

Get complete facts about the G-E "Kitchen Package" through your local General Electric distributor, or write to the Home Bureau, General Electric Company, Bridgeport 2, Connecticut.



The new Schuermann home and its General Electric Kitchen made a deep impression on future home huyers of St. Louis. It includes: Dishwasher, Disposall®, Refrigerator, Electric Range, and Steel Cabinets. Think how this type of worksaving electric kitchen would stimulate sales of your houses!

You can put your confidence in-



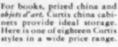
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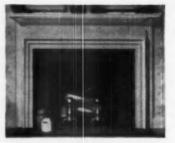
Ranch house-Cape Cod-Colonial-whatever the architectural style-whatever the size or cost of the house-Curtis has woodwork to fit your need. For the Curtis woodwork line is so wide-so varied -that it gives you practically unlimited scope in planning and building homes for every taste, need and pocketbook.

When you select Curtis entrances, mantels, china cases, stairways or kitchen cabinets, you can be sure of some very definite qualities. The materials will be carefully selected for every need. Craftsmanship will be fine because of Curtis precision manufactureheld to the highest standards for 84 years. Architectural styles will be correct. Costs will be moderate.

You'll find it worth while to have complete information on Curtis stock architectural woodworkjust mail the coupon.



Where the owner wants an many outstanding styles.





Here is one of eighteen Curtis styles in a wide price range.

entrance above the ordinary. this Curtis design will solve the problem and reflect good taste. Design C-1709-one of

A Curtis mantel makes the utility of a freplace beautiful. Curtis mantels "wither well"-they were witar well"-they were designed by leading architectshave fine proportions and detail.

A new Curtis Development PRESPINE

Prespine-the new wood material for use in panels in Curtis doors and other woodwork-now duplicates the natural grain of wood! Prespine panels, made of finely divided wood, will not warp, check or splinter-won't shrink or swell. Prespine is tadeprost ... can be quickly and economically finished by skilled or semi-skilled labor.



Curtis makes a camplete line of woodwork for the modorn home. Make your next house "all Curtin."

Curtis Companies Service Bureau AB-5W Curtis Building, Clinton, Iowa

Gentlemen. Woodwork	send	me y	out be	ook os	Cartis	Stock	Architectural
Name							

Address	
City	State
I am () Architect () Contractor (() Student. Please Check.) Prospective Home Builder

AMERICAN BUILDER



MAT 1950

HONEYW

23,000,000 HOMES OVER 30 YEARS OLD

> EXTERIORS INTERIORS HEATING SYSTEMS HEAT CONTROLS PLUMBING

these mean

MODERNIZATION creates business for entire BUILDING INDUSTRY



We're hot on the trail of one of the biggest markets that ever existed for the building industry !

It's the 23,000,000 homes in America that are more than 30 years old. That's more than half the homes there are in this country of ours. And they are sitting there with worn out plumbing, with antiquated kitchens, and with inefficient heating plants.

Those homeowners like the modern comforts and conveniences. They want good heating, too — only we have to remind them.

So we have.

We've started a campaign that is reaching newspapers and radio stations from coast to coast. Hard-bitten editors and newscasters know that people are interested in stories about improving their homes. So they are telling the public how to bring its houses up-to-date.

Naturally, we hope the public will replace old thermostats with our newer models. But anyway, we're telling the people that the best dollar they can spend is to modernize. We think they will.

So climb on the band wagon with us.

Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Leaside, Toronto 17, Ontario.

AMERICAN BUILDER



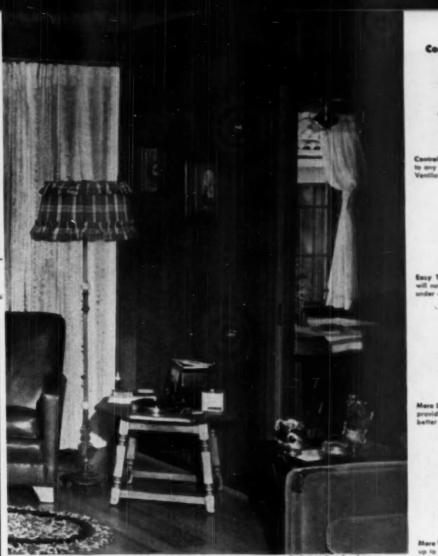


Ceco Casements ... Engineered

Anyone looking out of a Ceco casement for the first time experiences something in better living. The eye crosses easily to the beauty of the outdoors. There is no limit to the sense of space. And to live with Ceco casements for even a short time, is to appreciate truly sound value. For here, beauty and utility indeed are effectively combined. We believe all this can be attributed to a word—ENGINEERING. Actually, there are three phases of window engineering at Ceco...1. Creative engineering a ceaseless search for the new to blend with modern architectural effects. 2. Production engineering—organization of manufacturing processes to



In construction products CECO ENGINEERING



for Better Living ...

assure the lowest cost for quality. 3. Field engineering—here products are proved by practice. All this means meticulous attention to little things—to perfection of detail. That is why we say, in steel casements— CECO ENGINEERING MAKES THE BIG DIFFERENCE. When you build with Ceco, you know you've used the very best...you're sure of economy too.

CECO STEEL PRODUCTS CORPORATION General Offices: 5601 West 26th Street, Chicago 50, Illinois

Offices, warehouses and fabricating plants in principal cities

makes the big difference



Advantages of

Controlled Ventilation --- Ventilatory open to any position, capturing stray breezes. Ventilation possible up to 100%.



Easy To Open and Cless -- Windows will not stick or worp. Open effortlessly under all weather canditions.



Mara Light -- Stander frames and muniting provide up to 30% more light, assuring better vision, more view, too.



Mare Wall Space — Narrow frames permit up to ½ more wall space. A special advortage in small hames or apartments



Easy to Wash—Both sides of Coco cosements can be washed from within, There are no ladders to climb.



Basy To Screen-Coco covernents are screened on the inside, Store windows are applied on the inside, too.

Russwin extra quality tubular locks and latches at NO EXTRA COST

You get a lot more in Russwin quality "Keynob" and interior door tubular locks and latches . . . at seven vital points . . . but you don't pay a penny extra. Exclusive Russwin all-steel rack and pinion latch stays smooth, trouble-free for life. Russwins are easy to install, reversible for any hand of door. Save you installation cost and save the owner maintenance expense. See the complete line of "Keynob" and interior door tubular locksets in smart designs and finishes at your nearby Russwin dealer's. Russell & Erwin Division, The American Hardware Corp., New Britain, Conn.

RUSSWIN

dealers always have the edge ...



Profit-Making MACHINES FOR YOU!

PLOOP ANITENANCE PLOOP SANDERS PORTABLE TOOLS

EDGERS AND PORTABLE TOOLS. Model 8. 2-American Spinner Edger Postable Electric Model 3. 4-Amer FLOOR SANDERS Arris dard 8 -Ö. -Bantol. 12-American Deluxe, 17' brash spre Deluxe, 13' brush sprepal, 14-American 13 Low Boy 1240 Wat or Dry Vocum

MAY 1950

Aggressive engineering keeps American Machines outfront in ability to save job-time and labor for you ... and increase your profits! In this ALL-AMERICAN "family portrait" you'll

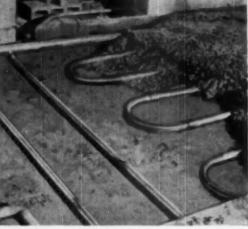
In this ALL-AMERICAN "family portrait" you'll find outstanding new members—the sensational new Super 8 Floor Sander...new American Rental Floor Sander...new American DeLuxe Maintenance Machines ...new American Wet or Dry Vacuum Cleaning System...and the new big-power American 8 ½" Saw! Also, other American Machines unbeatable for a wide range of everyday jobs in flooring, construction and maintenance. Send coupon for more details.

FLOOR MACHINES - PORTABLE TOOLS American Plone Su orfscing M 511 So. St. Clair St., Toledo 5, Ohi Please send latest catalog on the fol without obligation. Floor Sanders D Roor Edgers Offens Ne -----

NOW...ON-THE-GROUND FLOORS*

Prevent Condensation! Minimize Heat Lag! Block Heat Loss!





Important Advantages Result When ZONOLITE VERMICULITE AGGREGATE **Replaces Sand and Gravel in Concrete**

has recently been demonstrated actual measurement of soil temerature at various depths that there a very considerable loss of heat brough floors of ordinary concrete on grade. This explains the common omplaint that such floors are cold and tend to become unpleasantly damp through condensation of moisture from the air.

These objections do not apply, however, to on-the-ground concrete floors in which Zonolite vermitalite aggregate replaces the usual sand and gravel. These self-insulating floors prevent condensation-block loss of heat into the earth and, by minimizing heat lag, permit more accurate and immediate response to thermostatic control.

These natural qualities make Zonolite concrete an ideal base for radiant heat pipes. In an experi-mental installation, soil tempera-tures differed by 17.5 °F. beneath a non-insulated concrete slab and a slab of Zonolite concrete. The soil temperature of 82.5°F. beneath the non-insulated slab indicated extreme heat-loss, while the soil temperature of 65°F, beneath the Zonolite concrete clearly showed its ability to keep heat in.

Construction details and other data on the various applications of Zonolite concrete are available without cost to architects and builders. Mail the coupon today.



ABOVE: Typical use of Zonolite insulating concrete with radiant heating coils to mini-mize lead, lag and loss of heat into the soil below.



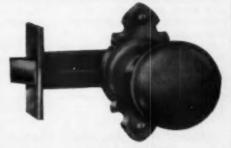
OLITE	Sold by lumber and building c supply dealers	oncrete floors.
TONULI	ZONOLITE COMPANY, Dept. AB-	50, 135 S. LaSalle St., Chicago 3, III.
WERMICULITE	ZONOLITE COMPANY-Dept. AB-50 133 S. LaSalle St., Chicago 3, Illinois	Zemelite is a registered Trademark
VERMICUL	Mail me free information on applications of Z	onolite concrete for on-the-ground floors,
INSULATI	Address	
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ZONOLITE COMPANY-Dept. AB-50 133 S. LaSalle St., Chicago 3, Illinois	Zemelite is a registered Trustrenark
Mail me free information on applications of Zo-	nolite concrete for on-the-ground floors,
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	AMERICAN BUILDES

Hardware that stands up to "hard wear."



No greater security . . . no greater convenience!



CR231 KNOS SET Offered in following styles---latch set, no locking on either side, bathroom set with push-button on rose, emergency key, chrome inside; bedroom set, push-button on rose, provision for emergency key. Automatic throw-off.

X H DESIGN Same combinations as XP22 Set.



tures. Front and back door keyed alike.

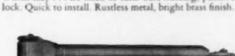




570 SCREEN DOOR CLOSER Liquid-type. Quick, quiet, complete closing. Easy to install and adjust... no reversing... screw holes spotted by full-size market.

choice for screen doors!

First



Works easy ... no knob to turn. Sure-holding, positive

506 AIRLINER SCREEN DOOR CLOSER

Pneumatic-type. Adjustable spring is completely concealed against dirt and tust. Modern appearance, attractive finish. Easy to install on doors of either hand, inside or outside . . . requires only 2 in. between doors.



MAY 1950

For power, for value, for every job THEY'RE GREATER THAN EVER

Year after year the nation's truck users buy more Chevrolet trucks than any other make. For every kind of trucking job they prefer Chevrolet power and Chevrolet value.

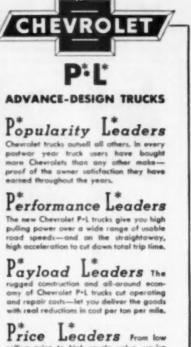
Now, Chevrolet's two rugged valve-in-head engines give more power than ever. Advance design, solid construction and low prices give Chevrolet more value than ever.

Prove it to yourself. See the new Chevrolet P·L Trucks. Check them for popularity, performance, payload and price. In 1950 they are more than ever America's best truck buy!

CHEVROLET MOTOR DIVISION, General Motors Corporation, DETROFT 2, MICH.

LEADING WITH ALL THESE PLUS FEATURES:

• TWO GREAT VALVE-IN-HEAD ENGINES: the New 105-h.p. Load-Moster and the Improved 92-h.p. Thrift-Master—to give you greater power per gellon, lower cost per load • THE NEW POWER-JET CARBURETOR: smoother, quicker acceleration response • DIA-PHRAGM SPRING CLUTCH for easy action engagement • SYNCHRO-MISH TRANSMISSIONS for fast, smooth shifting • HYPOID REAR AXLES—5 times more durable than spiral bevel type • DOUBLE-ARTICULATED BRAKES—for complete driver control • WIDE-BASE WHEELS for increased tire mileage • ADVANCE-DESIGN STYLING with the "Ceb that Breathes" • BALL-TYPE STEERING for easier handling • UNIT-DESIGN BODIES—precision built.



selling price to high resale value, you're maney ahead with Chevrolet trucks. Chevrolet's rock-bottom initial cost-outstandingly low cost of operation and upkeep and high trade-in value, all add up to the lowest price for you.



AMERICAN BUILDER

T WORRY ... IT'S

Floors and walls stay good-looking . despite little heros with big bats and

sharp cleats. Genuine Clay Tile advantages are all hits! No scrubbing, waxing or polishing . . . defies stains, scratches, burns and scars . . . good for a lifetime . . . rich decorator colors . . . wide variety of patterns . . . low cost . . . *fired-in* colors . . . never needs replacement . . . best of all—you no longer have to talk "substitutes." Genuine Clay Tile is available now !

The Tile Council of America, Room 3401: 10 East 40th Street, New York 16, New York. Room 433: 727 West Seventh Street, Los Angeles, California.

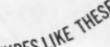
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BYP TRALER

COMPANIES :

Anarthur Brannell Hang Can Angelson The Ca Andhineture Telling Generacy, Inc. A addineture Telling Generacy, Inc. B addin forced Ca Consider The Manufacturing Ca Carlyle The Cangers, Inc. Manuel, The Cangers, Inc. Manuel, The Congress, Inc. Manuel, The Advantation Ca. Based The Congress, Inc.

"PRENIUM BUILT" DOOR FRAME FEATURES LIKE THESE MR. BUILDER



SELL HOUSES!

- Mitres will not open
- Sharply ROLLED Profiles
- Will not warp or crack
- Hinges welded to Frame
- All one-piece construction
- More Permanent

The powerful plus factor that sells houses-that's what you get when you specify premium-built Aetna Frames. By simply pointing out to your prospects how Aetna contributes guaranteed soundness and premium value to the house, you find them easier to convince. A clinched sale is more apt to follow!

Aetna Frames come prime-coated from the factory in one-piece welded steel. Time and weather won't damage or affect them in any way. Quickest of all frames to erect, they save you innumerable manhours-and can save you up to \$5 per inside opening. Used an a large scale in housing developments and in individual homes. Aetna assures you tremendous mass production economy. Your building supply dealer stocks premium-built Aetna frames in standard sizes.





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AETNA STEEL PRODUCTS CORPORATION

730 FIFTH AVENUE, NEW YORK 19. NEW YORK

MANUFACTURERS OF STANDARDIZED STEEL DOORS AND FRAMES FOR HOUSING UNITS.

FABRICATORS OF QUALITY HOLLOW METAL PRODUCTS FOR SCHOOLS, HOSPITALS, OFFICE BUILDINGS, ETC.

TRADEMARKED

as well as grademarked ...your double guarantee of plywood quality

Something has been added in the labeling of plywood produced at Associated Plywood Mills, Inc. It is the APMI trademark, and you'll find it together with the DFPA grademark on both exterior-type and interior-type panels manufactured by this company.

This combination of trademark and grademark is your assurance that regardless of where you buy APMI plywood, you get the guaranteed products of a pioneer mill in the industry...And you can purchase APMI plywood at any one of 12 centrally located sales warehouses from coast to coast, from experienced plywood men who are eager to serve you.

> Panels up to 60 inches in width and up to 144 inches in length.

Plywood plants at Eugene and Willamina, Oregon



APMI SALES WAREHOUSES

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OTHER SALES WAREHOUSES BESSONETTE & ECESTROM LOS ANGELES 11, CALIPORNIA

PACIFIC MUTUAL DOOR CO. TACOMA 2, WASHINGTON BALTIMORE 31, MARYLAND OHICAGO 8, HILINOIS GARWOOD, NEW JEBSEY EANSAS CITY 3, KANSAS SI. FAUL 4, MINNEDITA





1 Waterproofed Inside!

X46VC

Every one of the millions of tough cane fibres in its insulating board core is integrally treated with a waterproofing compound during manufacture.

far stronger, far more Double-

NEW CELOTEX

2 Waterproofed Outside!

This board is then coated on both sides, and on all edges, with a thick, enduring "raincoat" of specially-treated asphalt which seals out moisture.

Waterproofed! INSULATING SHEATHING



signs go up faster when you build with CELOTEX INSULATING SHEATHING!

When you build with new Celotex Insulating Sheathing, you assure your cus-

tomers of stronger, more enduring homes with higher re-sale value ... homes with effective sidewall insulation that means lower fuel bills in winter, greater comfort in all seasons. No wonder they're easier to sell!

Always outstanding for rigidity and bracing strength, Celotex Insulating Sheathing is today even stronger, more rigid than ever. It saves money on both materials and labor, because it insulates and builds – all at one low cost! Quick and easy to apply. Negligible waste. No building paper needed.

Although Celotex Insulating Sheathing is doublewaterproofed, it has over twice the vapor permeability required by government agencies! Safe even under severe exposure during construction.

No other insulation gives all the advantages of Celotex Insulating Sheathing. For no other is made of long, remarkably strong Louisiana cane fibres. And no other is protected by the exclusive patented Ferox* Process against fungus, dry rot and termites. Yet this strong rigid insulation, applied, CONTE NO MORE than ordinary sheathing!

Write today for your free copy of the informative new Celotex booklet, "How You Can Build Better Homes at Lower Cost." Gives full information on Celotex Double-Waterproofed Insulating Sheathing. The Celotex Corporation, Chicago 3, Illinois.

TYPES AND SIZES: 25/32" Big Board : 4' wide x 8', 9', 10', 12' lengths; square edges

25/32" V-Type Center Matched: 2' wide x 8' long; center matched on long edges

1 1/2" Big Boards 4' wide x 8', 9', 10', 12' lengths, square edges.

THE FAST, THRIFTY WAY TO CREATE BEAUTIFUL INTERIORS

Colotex Insulating Interior Finishes With the new, improved Celotes Insulating Interior Pinishes, you can easily create finished walls and outlings of unusual charms and distinction. And for surprisingly little money! For these pre-descrated structural panels build, multies and descrate, all at one low cost. They're

amazingly quick and easy to put up.

The range of exclusive new white and blended colors and textures, and the wide choice of shapes and size, enable you to achieve a variety of modern desensive efforts. Available in Tile Beard, Building Beard and Fipish Plank. Write new for details.

To make your homes easier to sell . . .

THE CELOTEX CORPORATION . CHICAGO

BUILD WITH GENUINE

UILDING PRODUCTS

S. ILLINOIS



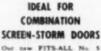
Mack says ... You'll open the FITS-ALL adjustable

Our Newest Alacrome FITS ALL No.5 Adjustable Screen Door GRILLE

The most beautiful, ornamental Fits-All Grille of them all! Its gracefully designed scrolls insure a wide sales appeal. Also fully adjustable for nearly all standard-size screen doors. Made of Alacrome metal with a permanent, silvery-satin finish that will not rust or tarnish. Note the ingenious patented holder in the lower right corner of the grille as installed on the door to the left. It permits easy adjustment of the scrolls to fit the door while being installed. Each grille packed in individual, attractive, fully illustrated display carton. We're sure this new grille will soon lead the field, so order your stock right away!



this eye-catching, colorful display carth complete instructions for inna for arranging



Our new FITS-ALL No. 5 Screen Door Grille is fully adjustable for many styles of screen domrs. For example, on the combination screenstorm (nor shown at the left, storm (nor shown at the left, the scrules may be installed in both the upper and lower sections in create a striking offect. Such grace-ful designs have andre all as eye-accessit appeall

COLORFUL SALES-MARING DISPLAY CARTON

ch grille is individually packed in



PATSALL

Nationally Advertised

door to new sales with SCREEN DOOR GRILLES

THEY'RE PRACTICAL, POPULAR and PROFITABLE!

With the addition of the boautiful new FITS-ALL. No. 5 our line of Fits-All Grilles is more complete, more eye-appealing than ever before! Now, your customers have an even wider choice of these attractive grilles.

Each one is fully adjustable to standard-size screen doors! Easily installed. Every Fits-All

Grille is artistically designed and made of Alacrome metal with a beautiful silvery-satin finish that won't rust or tarnish.

You'll want to have a complete selection of all 5 styles on display because when your customers see 'ern, they'll want to buy 'ern — se stock up NOW!



FITS-ALL NO. 1 → STANDARD GRILLE ADJUSTABLE TO DOORS AND WINDOWS

This attractive grille will fit nearly any door. Its scissor-like, accordion action permits easy adjusting from 18" to 37" between stiles. Also used as a window guard to keep prowlers out . . . and to keep little children from falling out window. Packed 12 to carton-screws furnished.

FITS-ALL NO. 2 -- Comes in pairs to fit the lower panels of doors with divided sections as illustrated. Fits doors from 30" to 36" in width. Also packed 12 to a carton.

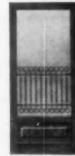


SUS ALL

FITS-ALL NO. FS new, graceful full-size grille. Two top bars are flex-ible to allow easy fitting to door. Packed 6 to a carton.

Nu-WAY SCREEN DOOR GRILLE

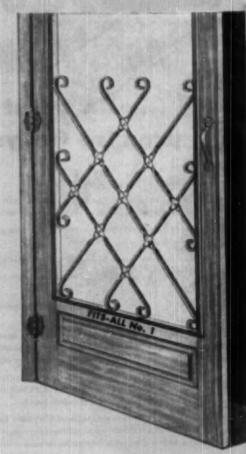
A sturdy, attrac-tive grille that any-Furnished in black enamel finish in 3 sizes to fit doors from 30"-32", 36" and 42".



Nu-WAY PUSH GRILLE -- An easy companion sale for screen door grilles. Fits above grille as shown at left. Made for 32" and 36" doors-packed 12 to carton.









one can install.

a \$1,250,000 investment

...with great promise for you!

We've just invested in foresight-price \$1,250,000.

SCDI

That's what we'll be spending during the next few years on research to reduce the cost and improve the qualities of structures made with clay products.

This, in spite of the fact that the structural clay products you use today are being produced and sold faster than ever before.

Why, then, spend more than a million dollars for research?

... because we members of SCP1 like being tops in your preference and want to stay at the top.

... because we believe modern research can give you still better brick and tileeasier to use, in more places, at less cost.

... because we know that even a slight improvement in our products will have tremendous potential benefits—for the millions of people who are served by structural clay products and for the building industry which makes such wide use of them.

With so much to be gained, by all concerned, SCPI feels that this million dollar investment in our future, and yours, is indeed sound.

NIW SCPI DIRECTORY: Write to your regional SCP1 office for this handy reference source. Gives you names and addresses of SCP1 member companies, types of brick and tile each makes, and other valuable information for users of Structural Clay Products.

IZ regional crass whelp you -Structural Clay Products Institute New Haven 10, Conn., 341 State St. New York 17, N. Y.

1949 Grand Central Terminal. Philadelphia, Pa., 1518 Walnut St. Canton, Ohio, 306 Market Ave., No. Pitteburgh 22, Pa.

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Ames, Iowa, 1201/2 Welch Avenue,

Denver 2, Colo., 208 Kittredge Bldg.

San Francisco S, Calif. 55 New Montgomery Street.

Seattle 1, Wash., Central Building.

Clay Products Association of the Southwest

Austin, Texas, Littlefield Building. Oklahoma City, Okla. First National Building.

MAIN OFFICE

STRUCTURAL CLAY PRODUCTS INSTITUTE

Letters to the Editor

Architectural Competition

Sir: On behalf of the National officers and staff, I want to thank you and the *American Builder* for the really outstanding contribution you made to our program this year at the Chicago Convention.

I have just had my first opportunity of reading the four Convention issues you published and I want to tell you that I think they are the finest thing yet. We have indeed come a long way since the first issues of this sort were printed.

As nearly as I can learn, the architectural contest was a complete success and resulted in some of the finest publicity we have received.

Beyond all of this, the National Association has an immense obligation to the American Builder for your support in all phases of the Convention during the last five years. No one knows better, than I what time, effort and money you have expended with the result that the whole affair is immeasurably larger and more constructive because of your support. I hope nothing will ever diminish this happy working relationship between us, particularly when I consider the grave dangers our industry faces-dangers far greater than that of temporary lapses of insuring and financing devices.

> Frank W. Cortright Executive Vice President National Assn. of Home Builders Washington, D. C.

Congratulations

Sir: Our Convention is now a matter of history, but I feel I would be remiss in my duty as Chairman if I were not to express my sincerest thanks and appreciation for the contribution of your time and effort in making this Convention the tremendous success that it was.

We of the National Association of Home Builders feel indebted to you for the service you have rendered us and the Industry in your efforts at the Convention.

> E. M. Spiegel Chairman, NAHB Annual Convention Passaic, N.J.

Sir:

I was very happy to hear of your being presented with the Silver Plaque from the Middle Atlantic Lumberniens Association.

I can think of no man in the in-

dustry who is more fully entitled to receive this plaque than you.

My most sincere congratulations to you.

W. C. Bell Managing Director Western Retail Lumbermens Assn.

Our Mistake

Mr. William T. Dreiss, Architect North Hollywood, Calif.

Dear Mr. Dreiss:

Thank you for reminding us of our error in the February issue. The last paragraph on page 117 ("Motels-A Big Opportunity for Builders") should have begun, "Owner O. A. Pearce . . . " instead of "Architect O. ." since the architect for A. Pearce the Holiday Inn motels was yourself. Please notice that on page 155 we have shown detail drawings of a serve-through idea designed by yourself, and that at the bottom of page 154 the courtesy line is for the Douglas Fir Plywood Association-a courtesy line which should have gone with the Technical Guide story on page 162! One mistake, like an A-bomb, seems to set off a chain reaction. We're sorry for the mixup.

The Editor

Attitude Toward Labor

Sirs: I am in receipt of your letter of February 10, regarding the renewal of subscriptions for the American Builder.

The members of the Local Union voted at its last meeting, not to renew any 'subscriptions, because of the Anti-Labor editorials.

We brought this matter to your attention on your visit, last fall; and, unless your editors can see fit to discontinue their anti-labor practices, we shall discourage all labor from subscribing to your magazine.

> L. W. Rushing Recording Secretary United Brotherhood of Carpenters and Joiners Tampa, Florida

EDITOR'S NOTE: I was greatly surprised to learn that you consider our editorial policy to be antilabor. Upon receiving your letter I carefully reread all of the editorials I have written in the past year, as well as those written by (Continued on page 222)



don't buy blind ...

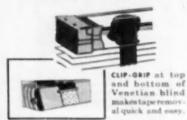
COLUMBIA QUALITY POINTS



AUTOMATIC SAFETY STOP holds blind where you want it-no slipping. Allmetal headbox completely encloses actin-smooth working parts.



SNAP-STOP is Columbia's exclusive device that keeps blind from rattling when window is open. Choice of enamelcosted aluminum or steel slats, galvanised to prevent rust. Easy to clean,



souss-upt, special mechanical feature for extra large blinds, means easy operation. A child can raise and lower the biggest blind.

TIAN BLINDS

Some people may tell you that all blinds are alike-but they haven't been around much. Knowing architects-institutional users and builders select blinds with their eyes wide open specify Columbia for unusual requirements and extra quality.

In short, insist on C. C. C. when you specify blinds. You'll get famous Columbia-Controlled-Construction. The man who pays the bills and everyone else using those Columbia Blinds will be thankful when you choose the best. For years and years and years Columbia Blinds will serve them well and beautifully. Remember-the bigger the job-the better the price.

Columbia Venetian Blinds and Window Shades are sold only in leading department and furniture stores and shade shops designated as Columbia Authorized Dealers.

We will gladly submit specifications for Venetian Blinds that can become a part of the General Contractor's bid. This includes a recommendation for correct type of slats and tape; mechanism; method of manufacture and proper installation. Let us call on you and discuss your particular problems.

BUINDS and WINDOW SHADES

THE COLUMBIA MILLS, INC. . 428 SOUTH WARREN STREET, SYRACUSE 2, N.Y. 34 AMERICAN BUILDER



A preview of the June 1950 issue of House Beautiful reaching your best customers on or about May 19th

June House Beautiful to feature . . . "BIG THREE" PACE-SETTER HOUSE

Climate Control, Privacy, American Style of Design in Ten-Page Presentation

For the first time since their introduction to the public, HOUSE BEAU-TIFUL will merge its three big building ideas of 1950—Climate Control, Privacy and American Style of Design in its exciting June Pace-Sett r House presentation! And the \$25,000 selling price of the house featured proves that all three aspects of better living can be had at moderate cost, if the homeplanner knows what to look for!

Built in the San Francisco Bay area of California, the primary climatological problem of this first pacesetter house of 1950 is wind control. But its design is basically adaptable to the problems of builders all over the country because wind control is a universal factor in determining climate-wise living comfort. If you study the illustration, reproduced on this page from the forthcoming issue, you'll see how the mass of the house itself is designed to act as a windscreen, deflecting steady winds up and over the sunny, enclosed patio. An estimated 2.500.000 home-conscious readers will find sensible reasoning behind this drawing and the extensive, detailed wind study included in the June issue as HOUSE BEAUTI-FUL's climate story of the month.



The above Pare-Setter House is just one example in the parade of practical, heneficial features June HOUSE BEAUTIFUL is presenting to the building trades and its house-planner families.

You'll find them sensible selling points, when discussing future homes with your best prospective customers.

You can also see how privacy and the American Style of Design are graphically illustrated in the drawing on this page. Even though this house is built on a 65 foot lot, the garage along the street front, daily living

As a Practical Aid To Your Business . . .

HOUSE BEAUTIFUL will continue to bring you a monthly preview. of the building information and ideas filling each forthcoming issue . . . well in advance of publication date. focussed in or overlooking the enclosed patio, the strategic fence and the grouping of trees in the proper place all add up to a decided country feeling. The emphasis on comfort and convenience, the lack of ostentation and insistence on good design, the use of materials available anywhere are typically American.

Every month, you'll be able to plan your selling strategy ahead of timeto use HOUSE BEAUTIFUL's enormous influence while it's working on the minds of your best prospects. Look for it regularly in American Bailder! You'll find it a practical and profitable aid to your business!

.... more

35

right from House Beautiful advertisers' BULLETIN BOARD

A directory of advectisers whose products are appearing in the June HOUSE BEAUTIFUL... which will reach your best customers on or about May 19th. FREE mounted counter cards for those products preceded by a number are available. See compon on last page for casy method of ordering.

INSULATION

1. Halsam-Wool Sealed Insulation WOOD CONVERSION COMPANY

SURFACING MATERIALS

a. WALLS

1. Blue Ridge Patterned Glass Wall Paneling BLUE RIDGE SALES DEVISION LIBBRY-OWEND-FORD GLASS COMPANY

1. Mississippi Structural Glass

MISSISSIPPI GLASS COMPANY MODERNIZE YOUR HOME WITH MODERNIZE TOCK HOME WITH DECORATIVE CLASS is the title of a new booklet insued by the Minimippi Glass Ca., St. Louis. Profusely illustrated the booklet features outstanding installations of Structural Corrugated and other arrest. ing decorative glass patterns in the modern ae. Free an requi and.

4. PC Glass Blocks

PITTSBURGH-CORNENC CORP.

S. U. S. Weldwood Plywood U. S. PLYNOID COM

Weldwood Plywood is the ideal way to satisfy the desire for at least one wood-pameled room, adding beauty and sales calue to the house at relatively little coar. Show your builder customers how little it costs -- you'll sell plenty of Weldwood and they'll sell their houses faster.

- 6. Romany Tiles
- UNITED STATES OCARRY THE CO. 7. Thermopane Insulating Glass
- LIBBEY-OWENS-FORD GLASS COMPANY
- 8. Trend of the Times Wallpapers C. W. SPOCKWELL CO.

b. FLOORING

9. Amtico Rubber Flooring AMERICAN THE & RUBBER CO.

that smart colors clinch sales, AMTICO Rubber Flooring presents the most amplete line of colors ever offered in rubner tile; twenty-two colors, high-style shades of great promotional value, and "bread and-butter" staples. Full-color advertising in class consumer magazines throughout 1950 will help boost your Amtico volume to new highs

L. ROOFING

10. Carey "Fire-Chex" Shingles THE PHILIP CAREY Mrs. Co.

Carey Fire-Chex Shingles are a real roofin improvement-the first in many years. Up improvement—the first in many years. Up to 106 times more fire-safe than ordinary shingles; with "shadow-blends" in red, green, blue and gray; copyrighted as "works of art". Fire-Chex offer builders and dealers more value to sell than roofing ever did before.

BOORS, WINDOWS & EQUIPMENT

- 11. Alcos Aluminum Windows ALUMINUM COMPANY OF AMERICA
- 12. Curtis Silentite Windows DRUE COMPANIES SERVICE BUREAU
- 13. Clearview Venetian Windows & Doors

CLEARVIEW VENETIAN WINDOW CO.

14. Columbia Window Shades

THE COLUMNIA MILLS, INC. *Warner Weather-Master Screen & Storm Sash Combinations WARNER MPC. CORP.

PAINTS

- 15. Ramue for Pools INERTOL Co., INC.
- 16. Nu-Hue Custom Color Paints MARTIN SENGUR COMPANY

SANITARY EQUIPMENT

a. PLUMBING

- 17. American-Standard Dresslyn Lavatory-Dressing Table AMERICAN RADIATOR & STANDARD SANITARY CORP.
- 18. W. A. Case Plumbing Fixtures W. A. Case & Son Mrc. Co.

19. Church Seats

C. F. CRUBCH MEG. Co.

20. Firestone "Velva-Flo" Acrator FIRESTONE TIRE & RUBBER CO.

The lady of the house is going to agree that this new invention fills a crying need in h kitchen. The amazing Velvz-Flo AERATOR takes splashes and spatters out of runs water. A simple attachment for the standard kitchen faucet-it transforms splashing water instantly into a foamy, clingy stream. Also speeds up washing and rimsing of dishware

*No-Deip Tape

J. W. MORTELL CO.

21. Permutit Automatic Water Softener

THE PERMUTIT COMPANY

revolutionary automatic water softenes low price has just been produced by The Permutit Company, originator of water conditioning. Here is a quality water softener for even moderate-income families. It sells for 43% less than comparable pre-war matics. A few choice dealer franchises Bisto available

b. WATER HEATERS

22. Permaglas Automatic **Gas Water Heaters**

A. O. SMITH CORPORATION

Another dramatic ad in the June issue, It's your ad, paid for by A. O. Smith. Put it to work using tie-in materials now available. The 20" x 27" ad blowup recently mailed to all A. O. Smith Registered Dealers will remind your prospects of Permaglas, the water heater that can't rust because glass can't rust.

c. FOOD WASTE DISPOSER

23. In-Sink-Erator Food Waste Disposer IN-SINK-ERATOR MIC. Co.

KITCHEN CADINETS

*Lyon Kitchens LYON METAL PRODUCTS, INC.

MEATING

- 24. Thermostate & Chronotherm MARNEAPOLIS-HONEYPERA RECULATOR CO.
- 25. Mor-Sun Furnace

MOBBINON STREE, PRODUCTS, INC.

26. Mueller Furnace

L. J. MURLIER FURNACE CO. Mueller Climatrol, (climate control for o fortable living) manufactured by the L. J. Mueller Furnace Company of Milwaakeo, for 93 years builders of top quality heating equipment. The complete Mueller Climstrol line includes furnaces, winter air conditioners, conversion burners, boilers, unit heaters, and cooling equipment. Write for "All Product" catalog.

27. L. P. Winkler Oil Furnace

U. S. MACHINE CORPORATION "Webster Base Ray

Heating WARREN WERSTER & COMPANY

28. Williams Oil-O-Matic

WILLIAMS OIL-O-MATIC DIVISION

WILLIAMS OIL-O-MATIC DIVISION ECREAS WILLIAMS CORPORATION Any questions about oil heat? Williams Oil-O-Matic's booklet, "There is a BIG Differ-ence in Oil Burners", offers a clarifying "buyer's guide", Candid comparison chart shows all types and kinds. Oil-O-Matic shows all types and kinds. Oil-O-Matic burns ANY domestic fuel oil, including the new hotter catalytic oils.

COOLING, VENTILATING, AIR-CONDITIONING

29. Chelsea Home Comfort-Cooling (Attic Type) Fans

CHELSEA FAN & BLOWER CO.

Complete package units for attic floor or attic wall mounting; spring-supported, quiet, vibration-free. Easy to install, Sizes from 24" to 60"; with guaranteed ratings from 5000 to 28,000 CFM. Request literature on operation and installation. Models for homeowners, rented homes and apartments.

30. Ilgdualaire Portable

Window Fan

ILC ELECTRIC VENTILATING COMPANY When you own an ligdualaire double pur-pose fan and one of those terrific summer eat waves strike, you can sit back and relax in the shade-tree comfort of your own home. Sleep under blankets while others swelter. Your room temperature will drop as much as 20° with ILG fans.

31. Fedders Room Air Conditioner FEBRERS-QUIGAN CORPORATION

32. Frigidaire Electric

Dehumidifier

FRICIDAIRE DIVISION OF

GENERAL MOTORS CORP.

Here's a sure simple way to check moisture damage - electrically and automatically! The amazing Frigidaire Electric Dehumidiher passes damp air over chilled coilsforcing moisture to condense into container or drain. It's been proved in thousands of home and business installations is used by many stores to protect valuable inventories.

33. Mitchell Room Air Conditioner

MITCHELL MANUFACTURING CO. The makers of the world's finest air conditioners, Mitchell Manufacturing Company, feature their 1/2 ton and 1/4 ton models. Available in decorator's beige, the Mitchell Available in occurator a beage, the solucient cools, debumidifies, filters, circulates, venti-lates. Quiet, easier to install than television set, outperforming every other roots air conditioner for home or office. Folder. "What are the FACTS" available.

354

34. Ousis Air Dries

Eaco Mrs. Co. New, OASIS AIR DRIER, an economical, electrical appliance for natomatically re-moving excess mainture from air. Reduces humidity. Ideal for installations in hasement workshops, recreation rooms, department store warehouses, hank vaults, etc. Eliminates age-old problems of mold, mildew and rust on valuable machinery, luggage and clothing.

35. Sno-Breeze Air Cooler Fans

PALMER MPC. CORP.

"Solvay Air-Dryette, Jr. Solvar Sales Division Alles

CHEMICAL AND DYE CORPORATION

The new Air-Dryette, Jr. absorbs dampness in basements, closets, etc. Absorbs up to 3½ quarts per day. The Air-Drystite is in-expensive, clean, safe, easy to me. For near-est dealer and informative booklet, write Solvay Sales Discision.

36. Torrington Moving Air Book Box 808 TOBRENCTON, CORN.

37. Vent-A-Hood Kitchen Ventilator

VENT-A-HOOD CORP.

Covering the ENTIRE range area, Vent-A-Hood instantly removes all cooking steam, grease vapors, odors and heat . . . without interfering with air-conditioning or beating cystems. Windows, walls, woodwork and furniture retain their fresh, clean, new appearance, 250,000 owners tell us that the extended life of decorating plus savings on cleaning hills for rugs, draperies an nishings more than pay for a Vent-A-Hood Information and literature on request.

38. Rusco's Magic Panel Window Ventilator THE F. C. RUSSELL COMPANY

MAJOR APPLIANCES

- 39. Deepfreeze Refrigerator with Freezer Compartments DESPTRENZE DIVISION-MOTOR PRODUCTS CORP.
- 40. "Suds Nº Rinse" Dishwasher "Quick-Suds" Washer **Osnow** Products Co.
- 41. Philco Home Freezer PHILCO CORPORATION

92. Presteline Refrigerator

LEESON STEEL PRODUCTS, INC. Presteline Refrigerators-Special traffic promotions available on new 1950 lines featur-ing "Five Zone Refrigeration". Heautiful styling accents full-length door and special esign compartments for each type of food and 9 cubic foot models. Prices start at \$199.95 for a big "8"

MASONEY

42. Marble for the Home

MABLE INSTITUTE OF AMERICA A new booklet, "Marble for the Home" is made available for free consumer distribu-tion by the Marble Institute of America, Iac. This copiously illustrated booklet with pages in full color is part of a new campaign by the Marble industry intended to keep pace with a revived interest in marble for the hos

43. Portland Concrete

PORTLAND CEMENT ASSOCIATION

HARDWARF

44. Som Invisible Hinges

SOME MANUFACTURING COMPANY as Invisible Hinges are mortised in the door and the jamb where they are com-

MAT 1980

pletely hidden from view. This unique fea-ture allows the flush, smooth, streamlined rior effects that are so necessary to by modern architecture. The in your really modern architecture. sales promotions with Suss HOUSE BEAU-TIFUL advertising and increase your profit machure.

LIGHTING FIXTURES

45. Universal Pacemaker Glass Lighting Fixture

LICHTOLIER, INC.

"Universal Pacemaker" was specifically designed by Lightolier to help builders sell houses faster. A build's scaled textured glass owl suspended by highly-styled chandelier like clasps, it achieves a "built-in" look at a nominal cost. Available in 15 different models, some with "co-louvered" letts spotlights.

COMMUNICATION

46. Nutone Chimes

NUTONE CORP.

New homes sell faster with features that appeal to home-bayers like the inviting tones of NuTone Deor Chimses. Write for facts showing how NuTone products make homes more attractive and saleable without straining your budget.

MISCELLANEOUS STRUCTURAL MATERIAL

Never-Stain Aluminum Nails NICHOLS WIRE & ALUMINUM CO.

FUNCES

- 48. Dubois Woven Wood Fences DUBOIS FERCE & GARDEN CO., INC.
- 49. Rusticraft Woven Picket Fences RUSTICBAFT FENCE CO.

PLANT FOODS-WEED KILLERS

50. Vigoro, End-o-Pest, End-o-Weed SWIFT & CO.

GARDEN EQUIPMENT AND ACCESSORIES

- *Allenco Parkside Sprinkler W. D. ALLEN MANUFACT UBENG CO.
- * All Metal Spade Rake ALL METAL COMPANY **51.** Avon Laurn Sprinkler

DIVISION OF GENERAL SCREW MACHINE. PRODUCTS, INC.

- 52. Crystal-Mist Laurn Sprinkler CHICAGO ROLLER SRAYE CO. SPRINKLER DIVISION
 - *Eshleman Power Mowers ESHLEMAN CO.
- 53. Jacobsen Power Loaf Mill with Mower
 - JACOBSEN MPG. CO.
 - ***Gravely Tractor** GRAVELY MOTOR PLOW &
 - CELTIVATOR CO.
 - *Iri-Gator
 - THOMAS MANUFACTURESS COMPANY
 - *Majestic Outdoor Fireplace
 - Unit

THE MAJESTIC COMPANY

A fast-moving, profitable item for Spring and Summer sales. An all-metal, durable unit around which purchaser builds fire-place of own choice of material and design. Can iron bar grates adjustable for charcoal or wood. Offered in four sizes and types, economically priced. Free display card, mats and other sales promotional material.

*Meko Seedling Spoon MERO COMPANY

54. Moto-Mower Power Mower MOTO-MOWER COMPANY

*Ralmar All-Aluminum Wheel Barrow

RALMAR PRODUCTS CO.

55. Sunbeam Hedge Trimmer SUNBAAM CORPORATION

SCHBAAN CORPORATION America's favorite. Powenful. High Spend. Lightweight. Easy to-bandle. Simple to oper-ate. So light a woman can easily use it. Exclusive clutch prevents damage to blades or gears from wire, woren fence, etc. A precision instrument in every detail—by the makers of famous Sunbram electrical appli-

56. Wiss Flower Cutter

J. Wiss & Sons Co. sique Flower Cutter-Holder by Wim. \$2.95. With one hand and one motion you can cut and hold out-of-reach flowers. can cut and hold out-or-reach Holder is made of aluminum, weighs 5 cm., is 18" in length.

SWIMMING POOLS

57. Koven All Steel Swimming Pools

L. O. Kovan & Baos., Inc. "No cas ster card evailable.

Send for your FREE House Beautiful

Window and Counter Display Card this easy way

Circle the numbers below which appear beside the advertisements you wish mounted, fill in your name and mailing address and mail coupon to: Merchandising Division, HOUSE BEAUTIFUL Magazine, 572 Madison Avenue, New York 22, N.Y.

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15	16	17	18	19	20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37	38	39	40	41	42
43	44	45	46	47	48	49	50	51	52	53	54	55	56
57	92												

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AB May

You Need All Three...You Get All Three

1. PERFORMANCE, 2. DEPENDABILITY, 3. SERVICE

HOMELITE Cannyable GENERATOR



 Performance. True, a Homelite Gasoline Engine Driven Generator is light enough for one man to pick up and carry but its performance is big enough to operate all your electric hand tools. In fact, it gives you power plus... power plus a large overload capacity.... power plus a constant voltage under all loads ... power that isn't sapped by long dangerous cables. Easy to get on the job; quick to start at all times, never bathered by extreme temperatures, a Homelite will keep your power tools going at peak efficiency always. It will save time and money for you on all jobs. Ask for free demonstration and see for yourself.

STICK TO THE RULE OF THREE 1. Performance 2 Dependability 3. Service, DEPENDABIC, and you'll always stick to a Mamelite



BADDRACTURERS OF HOMEUTE CAREVADLE PURIES - GENERATORS - BLOWERS - CHAIN SAWS - FAVING BREAKERS



2. Dependability. For more than 25 years, Hamelite engineers have specialized in building carryable gasaline-engine-driven units. Their experience in building close to three hundred thousand of these units has been responsible for the simplicity of design and precision construction with finest materials that insure long-haul dependability and lowest maintenance costs.



3. Service. A Homelite seldom needs service, but when it does, there's a trained Homelite service man near you ... a man who will drive his truck right out to your job and put your Homelite in perfect operating condition. This prompt, competent service is a great money saving factor for those who want to get continuous production out of their power tools.

BLANKET-TYPE

ROCK WOOL BATTS

Warm Up Your Insulation Business with this Easy-to-Store, Easy-to-Sell Barrett Product!



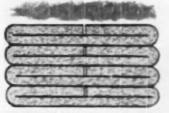
8-FOOT LENGTHS. Go on faster. Fewer seams—an unbroken vapor barrier from floor to ceiling—mean better insulation, leas condensation. Also available 15" x 44" and 15" x 48", full and semi-thick.



WON'T LUMP UP. Firm, springy Barrett Rock Wool doesn't "drift" or get lumpy. High resilience assures uniform density of insulation over all areas.



FIEL-SAFE. Barrett® Rock Wool Insulation is a fire-proof material—functioning as a barrier to the spread of fire. A blowtorch won't burn it.



NO STORAGE CASUALTIES. Batts can be stored for long periods and will spring back to specified thickness when removed. No "flatties" at the bottom of the pile!



SOFTENS SOUND. Cuts down outside noises and, strategically applied to partitions between rooms (as in the case of a bathroom), it virtually eliminates sound transference.



GUICE SELIVERY. Barrett's conveniently located distribution points assure immediate attention to your orders, no lost sales through empty shelves.





*Reg U.S. Por. Off.

Homes sell faster when you install

Stanley Floating Door Equipment

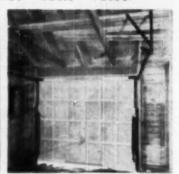
You build more value into a house... give people what they want when you provide Stanley Floating* Garage Door Equipment. Its exclusive Floating Action (doors literally float up out of the way) has caught on with 'some buyers.

O's doors or new can be equipped with this modern garage door hardware. It's easy to install, and the Stanley line includes a type to fit every need and pocketbook, from estate to small home owner.

Your prospects will see Stanley FLOAT-ING Door Equipment advertised in the FOST. They're already familiar with "Stanley" — the recognized, preferred name in hardware. Take advantage of the demand —equip the homes you build with Stanley Floating Door Equipment[†]. It's a real selling FLUSI Get all the facts and details.

*Reg. U.S. Pat. Off. The Stanley Works, New Britain, Conn.

*FOR ANY RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DOOR THAT LIFTS * SLIDES * SWINGS * ROLLS * FOLDS.





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maintenance cost...an important reason

Gas Refrigerators were chosen for these 1,860 Beach-Haven Apts., Brooklyn, N. Y.

"Of the many features 1 like about the Servel Refrigerator," writes Fred Trump, prominent builder of Brooklyn's new Beach-Haven Apartments, "the one that impresses me most is Servel's amazing record for *low* maintenance costs. Nothing ever seems to go wrong with them. There's no trouble with breakdowns... no worrying about repair bills. Just put them in, and you forget they're there."

Today, there are more than three million Servels in use throughout the world. Among these are many of the original models...still operating dependably after more than 20 years of service.

Here's the reason-Servel uses a bo-

sically different principle of refrigeration. A tiny gas flame does all the work instead of a motor, *Exclusive* with Servel, and years absod, this unique freezing system does away with all moving parts. So there's no chance for mechanical breakdowns. No machinery to wear ... no pistona, no valves, no pumps.

As a result, apartment and multiplebousing operators enjoy a minimum of trouble and expense year-in, year-out with Servel... and for more years, too. And tenanta get the benefit of Servel's silence... always a strong selling point in renting. There's more you should know, so consult your Sweet's or write to Servel, Inc., Evaneville 20, Ind.

'For example_

Corpus Christ, Tex. "Our 750 Gas Refrigerators are 4 years old and cost lass than 50f a year per unit to maintain."

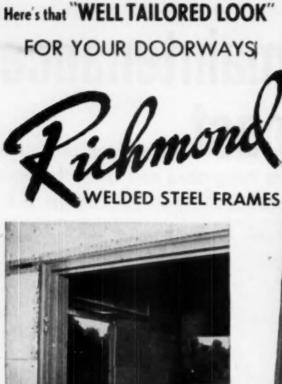
Mobils, Als. "After nine years, our 208 Servels cost only 1/ a month per unit for uphsep."

as Angeles, Calif. "In 12 years our Servels have cost us anthing in repairs."



٨

MAT 1950



You keep door frame erection time at a minimum by using Richmond welded steel frames with integral moulded trim. These strong, well-built units will help to lower your building costs because the frames are simple and easy to install.

Quality 18-gauge one-piece Richmond Frames are made up of three members—hinge jamb, lock jamb and head member having the corner- mitered and securely welded. Hinges mortised and spotiwelded to frame cannot work loose through usage. Universal brass strike plate is included with an enclosed dust box spot welded to frame. A red oxide primer is applied at factory.

SEND COUPON TODAY

for full information about Richmond Steel Frames

Richmond, Indiana		
Please send me booklet give frames	ng full intermatio	n about Richmond Ste
NAME		
BUSINESS ADDRESS		
CITY	ZONE	STATE
POSITION	TYPE OF BUS	LINJESS.



Tough, long lasting, good looking Richmond welded frames are weather resistant. Since moisture cannot penetrate, size will not change or swell. Frames can't warp or crack and there is no possibility of miters opening.

RICHMOND WELDED STEEL FRAMES



ways to CUT CONSTRUCTION COSTS!



Per MAN Black & Decker Quick-Sawa give you perfect balance, close-coupled design, reduced weight and length, comfortable "saw grip" switch handle, complete safety. B&D ELECTRIC HARDERS are hard-hitting and amazingly husky, yet compact and light in weight. Result: your men can handle either tool more easily, with less fatigue; turn out more work every day.

Per HOUR Black & Decker QUICK-SAWS, powered by heavyduty B&D-built universal motors specially built for tough sawing operations, are ten times faster than hand sawing. Black & Decker ELECTRIC HAMMENS deliver thousands of sharp, positive hammer blows per minute to make light work of many tough construction jobs.

Per TOOL These B&D Tools are built to last, give you extra years of heavy-duty service! Both tools are fully protected against dust and over-heating: have powerful motors, extra-tough gears, husky housings, all the extra strength and stamina built into every Black & Decker Tool!

WRITE TODAY for free, detailed calaleg. See your naarby B&D Distributor for full details on Saws, Hammers, Drills, Impact Wrenches and meny after fime-saving, cast-cutting construction tools! The Block & Docker Mig. Ca. 666 Pennsylvania Ava., Towson 6, Md.



BLACK & DECKER ELECTRIC MAMMERS drive a wide variety of tools to drill ar channel in brick, stone, con-

crote, chip, clean and scale metal, gouge, shape and notch limbers, seam and could, temp and vibrate concrede forms, scult concrete surfaces to remove form marks. Completely self-contained. Universal motors spectre from any standard 110 or 220 volt power line or portable generator. Four module, roted by drilling capacity in concrete for %7, %6, 1%, 1%.

BLACK & DECKIN BLECTRIC QUICK-SAWS rip, crosseed, dodo, angle groove-in wood, metal, stose, conpositions. Quickly adjusted for angle or depth of cell. Bory to change blocks and discs. Universal mesters operate on any standard IIO or 220 volt power line or partable generator. Three models for cathing to depths of 216", 216", 316".

"A real advancement in window screening, easy to enaps into place' handle and install, and architecturally sound. rold Steaus, Sec'y Contr. Corp., Brooklyn, N.Y.

DURALL ALUMINUM TENSION SCREENS



Home owners and builders who know Durall are saying all the things you read above, and more!

With its first-introduction, this remarkable new kind of window screen captured the imagination—and appealed to the good sense and pocketbooks —of home owners and builders alike. Over 2,000,000 are in use today!

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NORMAN JOHNSON, Archited

ANDERSEN

BREAKFAST WITH A VIEW is a daily pleasure in this dining nook, whose corner WINDOWALLS are formed by stock Andersen Casement Window Units.

These wood windows invite sunshine and fresh breezes to every meal—and all year long they also function as walls. They are more than windows, more than walls... they are WINDOWALLS. The wood of these windows lends beauty and color to both the room and the view, and in sub-zero weather, wood's insulating qualities are an added advantage.

Write for specification data or see Sweet's Architectural and Builders' Catalogs. Sold by millwork dealers.

The new Andersen WINDOWALL Tracing Detail File will be sent on request to architects and designers at no charge. "Indocedent of Anderson Conversion

Andersen Cosporation



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STEELCRAFT STEEL RESIDENCE CASEMENTS MADE OF HOT-ROLLED SECTIONS ... BONDERIZED

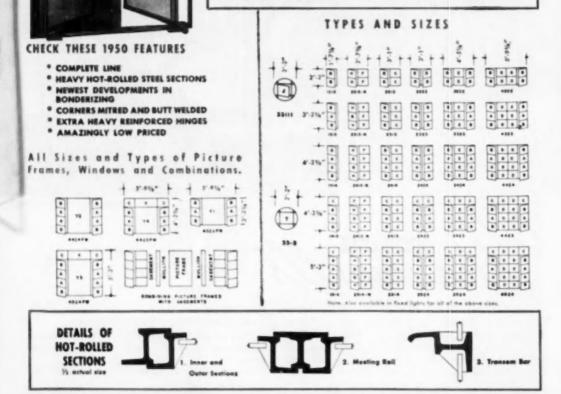
Sitesicraft new offers contractors and dealers a complete line of Steel Residence Case-menta, Utility and Baarment window, ... plus Steel Casings, Surrounds and Com-bination outside-inside trim. Steelcraft Steel Residence Casements are made of heavy hot-rolled solid sections of uniform thickness, with butt welded mitted corners. Extra long reinforced hinges with bronze pins and washers provide ample

clearance for anfe and easy cleaning of the enterior of the glass from the inside. Sections are designed for maximum daylight. Heavy bronze finish roto us lever type hardware may be used for size in operation of the ventilator. Screens and storm such are ossily attached to the inside of the frame. All com-ments are BONDEHIZED and given a shop prime cost of naint backed on in secondance prime coat of paint baked on in accordance with Steelcraft Bouderizing specifications.

STEELCRAFT BONDERIZING SPECIFICATIONS

All building products shall receive the standard Steelcraft bonderised finish which includes a thorough cleaning by high premure aprova of a hot alkaline solution and hot water, a uniform eich in bonderite chemicals, and painted with one coat of gray primer by the patented

complete flow coat process to ins now cost process to meure competen-coverage, oven dried, and baked a mini-mum of twenty minutes at 300° F. To-insure uniformity, this entire process of cleaning, bonderizing, prime paint, and oven drying shall be continuous and automatic without manual handling.

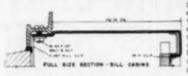


STEELCRAFT MANUFACTURING THE COMPANY

AMERICAN BUILDER

STEEL RESIDENCE CASEMENTS

INTERIOR STEEL CASING



Similarit nicel casings are ideal for all types of wall construction. They are easily installed at a minimum cost . . the casing, consisting of head, jamb, and sill members, eliminates plaster returns, stool and trim, Steoler aft steel

casings are BONDERIZED and painted with a baked on prime cost of paint in accordance with Steeleraft Bonderining apacifications. Excellent finish for finish cost of paint. They are fire-resistant and cannot warp, abrink, or crack. Shipped knocked down for assembly in the field. Easily stocked and available in all types and sizes for Residence Steel Casements.

EXTERIOR STEEL SURROUND

Storioraft stoel aurrounds are recommended wherever wider and moulded frame appearance is desired. Designed with identical contours and ends accurately cuped they present neat corners and joints in the assembly. Installation is simple since they are nailed to the rough

opening. The casement is they are manded to the rough surround with self tapping screws. Made of galvanized steel, they are BONDERIZED and given a shop east of paint baked on in accurdance with Steelcraft Bonderizing specifications.

STEEL BASEMENT WINDOW

Steelcraft tilt-in type steel basement windows are made of hot-rolled casement window sections, which provide double weathering contact throughout. Armless ventilators provide absolute trouble free operation and are easily removed for channing. Positive handle locks such tight against frame. Screens are easily attached to the outside of the window with special clips. They are BONDER-IZED and given a shop prime cost of paint baked on in accordance with Steelcraft Bonderizing specifications.



STEEL UTILITY WINDOW

Steelcraft steel utility windows are designed for use in stock barns, basements, shops and garages. They are made of hot-rolled casement window sections providing continuous double weathering contact. Tilt-in type armies ventilators can be easily removed

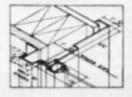
SSMOYNE, OHIO

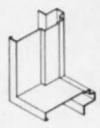


Draft guards for sides of windows can be furnished. Screens are easily attached on the outside. They are BONDERIZED and given a shop prime cost of paint baked on in accordance with Steelcraft Bonderizing specifications. STEEL

CINCINNAT

COMBINATION STEEL OUTSIDE-INSIDE TRIM





This one-piece outside-ionide surround is installed at a fraction of the normal time required for multiple trice and casing. It also saves on initial and maintemance costs. This unit eliminates plaster returns. stools and trim. In dry wall construction, the wall material is slipped under the surround, eliminating any additional trim. They provide a neat and attractive trim for any type of building. Made of galvaniaed steel and welded into a complete one are BONDERIZED they and given a shop prime cost of paint balled on in accordance with Steelcraft **Bonderizing** specifications.

FORMED STEEL LINTELS

Steelcraft formed ateel lintels are used for any window or door opening in any type of construction. Available in a wide range of stock aines. Continuous ribe greatly strengthen the heavy gauge steel, and provide an excellent base for brick and mortar. All lintels are BONDERIZED and given a shop prime cost of paint baked on in accordance with Steelcraft Ronderizing specifications.

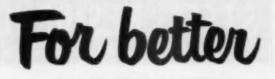


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B HANDSOME CROSLEY BLEC-TRIC RANGES (including 2 apartment-size models) with 33 different selling features that add extre appeal to your kitchen plans.





IO BEAUTIFUL SHELVADOR" RE-FRIGERATORS-all with recessed shelves in the door that double "front-row" space.

With Crosley kitchen appliances and equipment you can easily plan a complete kitchen to fit almost any size of shape of room desired.

> & EFFICIENT HOMEAND FARM FREEZERS from 4.1 to 20-cubic-fool capacity, with refrigerating compresser unit warranted for 5 full years.

Crosley-Better Products for Happier Living



CROSLEY

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7 MODERN KITCHEN CARI-NET SINKS with cabinats of all-steel welded construction and one-piece heavy-duty steel tops.

THE CROSLEY ELECTRIC GAR-BAGE DISPOSER -con'i jam er cleg! Designed to fit practically all standard sinks.

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& TABLE-TOP ELECTRIC WATER HEATERS In 30and 40-gallen Custern and De Luxe Models.

New Crosley Builders' Plan! Special data and service are available free to all builders and architects. For information write;

> National Builder Sales, Crosley Division **Aveo Manufacturing Corporation** 1329 Arlington Street, Cincinnati 25, Ohio

ATTRACTIVE KITCHEN BASE

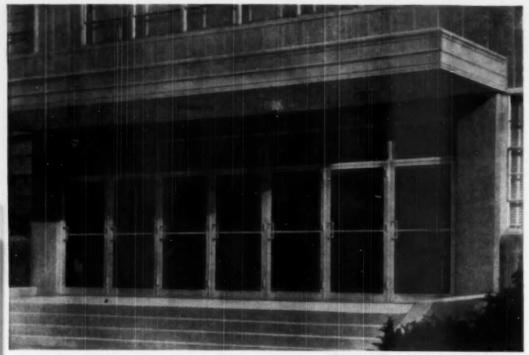
CABINETS at convenient working height, with heavy-duty linsleum tops and continuous back-splash guards.



DURABLE KITCHEN WALL CABINETS of heavy-gauge wolded-steel construction, with baked enomel finish to match Crosley kitchen appliances.



DACTRIC WATER HEATERS



Bullcott Johnson Shoe Co. Recreation Center in Endloint, N. Y. A. Y. Lacey & Son, Architects, Binghamtan, N. Y.

Kawneer Stock Entrances meet EVERY building requirement—AND REDUCE COSTS



FOR STORES, SHOPS, RESTAURANTS, THEATRES, SCHOOLS, HOSPITALS, HOTELS, OFFICE BUILDINGS, FACTORIES, ETC.

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Expertly engineered for smooth, long-term operation, these handsome, modern-styled Entrances were formerly available only as specially made units. They are now carried in stock, completely assembled and ready for quick installation. Factory delays and complicated installation problems are eliminated.

Kawneer metal-and-glass construction minimizes the possibility of breakage and the danger of people colliding with doors. Precision fitting protects interiors against damaging soot and dust. It also cuts heating and air conditioning bills by reducing the loss of warmed air in winter and cooled air in summer.

To find out more about these outstanding Entrances, write 228 N. Front St., Niles, Mich., or 2588 8th St., Berkeley, California,



ARCHITECTURAL METAL PRODUCTS Store Front Motols • Aluminum Boll-Type Awnings Modern Entrances • Aluminum Facing Materials

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Build <u>better</u> and <u>faster</u>—and at <u>less cost</u> with an all-purpose

Let one machine do the work of many! That's the way to compete profitably in today's building market.

DEWALT

One DeWalt gives you 10 power machines-helps you build faster, more accurately, and at lower cost. DeWalt starts your house for you - cutting rafters, studs, joists, bridging, fireblocks, stair horses, etc. DeWalt finishes your house for you - cutting interior trim, built-in cabinets, shelving, trellises, window boxes, etc.

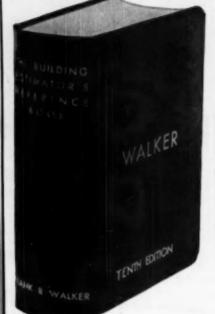
DeWalt is fast, safe, accurate! Write for catalog. DeWalt, Inc., 15 Fountain Avenue, Lancaster, Penna. (Subsidiary, American Machine and Foundry Company.)



1. Radial Arm Saw

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1700 pages, 1000 illus., 1000 tables, 25-page index, 4 ½ x 6 ½, flexible

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Gig	Zone	. State	A.B. 5-50 I

By Frank R. Walker

The new Tenth Edition contains latest estimating and cost data on everything that goes into house construction, from foundation to finish. It can be used in any locality, regardless of local prices or wage scales. It covers all types of small and large building construction.

For 30 years Walker's handbook has furnished contractors and estimators the most complete compilation of estimating and cost data available. The new edition has been revised and improved in the light of postwar conditions. Thousands of items that enter into construction estimates are logically arranged and tabulated for ready reference. A complete cross-index enables the user to quickly locate any subject.

HELPS PREPARE BETTER ESTIMATES

A copy of this new edition will help any builder, contractor or estimator in figuring and performing work at minimum costs. It will reduce the chance of overlooking an important item in an estimate. New methods of doing various kinds of work are explained and new building materials that have come on the market since wartime restrictions were lifted are fully described.

SEND FOR A COPY TODAY

Send for a copy of the new Tenth Edition of THE BUILDING ESTIMATOR'S REFERENCE BOOK today. Take advantage of the many opportunities it offers for increasing your profits through better estimates. Money back if not entirely satisfactory.

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With The Building Estimator's Reference Book The Vest Pocket Estimator

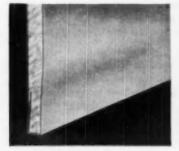
This is one of the most popular little estimating books ever used by contractors. It contains 220 pages, $2\frac{1}{2} \ge 5$ inches, and is flexibly bound to fit the vest pocket. Estimating and cost data most frequently referred to is presented in condensed tabular form. It can be instantly referred to on the job or in the office.

AMERICAN BUILDER



If your requirements are DRY-WALL INTERIORS... Look to USG's line of famous SHEETBOCK* gypsum wallboards, there's one for every purse and purpose. For example, the woodgrained boards-Walnut, Knotty Pine, Bleached Mahogany-combine the fire protection of

Walnut, Knotty Pine, Bleached Mahogany – combine the fire protection of gypeum with the luxury of wood paneling at a fraction of the cost. Regular SHEETROCK is available in various thicknesses and lengths for new construction, modernizing, temporary and display work. Typical of this wide U.S.G. product line are the materials below.



Regular SHEETROCK

Used with the PREF-A-TAFE Joint System, it produces emooth, seamless wall and celling surfaces with practically invisible joints. Here are good solid-walled rooms that take shape in days, not weeks—that can be decorated and occupied almost immediately. Rooms inexpensive to build, without compromising quality. In addition, Regeneracca is frequency, versatile, lasts a "bouncetime."



Insulating SHEETROCK

The advantages of regular SHERTROCK plus (1) all-year insulation, (2) effective vapor barrier, thanks to the aluminum foil laminated to one side. Think of the economy appeal this gives new homes. For in one operation, with this one material-rooms are built, insulated, and damaging vapor controlled--all three at once with 3-in-1 Insulating Busersects!

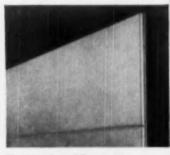
Build with Confidence Build with USG

IN BUILDING

Every U.S.G. product-from its development in the famous U.S.G. laboratories until its actual use-undergoes the most exacting tests known to the industry. Quality and performance are always carefully measured and rigidly maintained.

That's why the famous U.S.G. crest is the symbol of quality for America's builders. That's why they build with confidence when they build with U.S.G.

For the U.S.G. solution to your problem, call in your U.S.G. representative, or write United States Gypsum, Chicago 6, Ill.



New Laminated SHEETROCK

The ultimate in dry-wall construction featating two layers of SHERTROCK, job laminated, for more fire protection, added sound resistance, increased strength, smoother beauty—important entres that help you will more house. So build with this up-to-date double wall and you create interiors worthy of America's finest house.

47. M. Bog. U. S. Pot. Off.

85% of all Prospective Home Owners want Oak Floors



THE LOOK THAT SELLS



"I anxiously wait until I see that first look on my prospect's face as she enters the door of one of my houses. I know if she is pleased with what she sees first, the first step to a sale is made.

"That's why I always put oak floors in my houses. Women like them because they're so easy to clean and look good with all furnishings. Men like them for their low upkeep, lasting qualities, and the extra value they add for resale. It's no wonder 85% prefer oak floors.

"For my part, I don't gamble, I use oak."

See our catalog in Sweet's

NATIONAL OAK FLOORING MANUFACTURERS' ASSOCIATION DEPT. 5-5 • 814 STERICK BUILDING • MEMPHIS 3, TENNESSEE

Nothing helps sell a house faster than Good Oak Floors

Fitter in the Building Field

Increased Mortgage Competition Developing

THE nation completed the most spectacular winter home building season in its history in February when 80.000 new non-farm dwellings were started. Starts for January and February were 59 per cent above last year. Apartment building has been showing a big increase, but, nevertheless, construction of new one-family houses is at a record high. About 790,000 singlefamily houses were begun last year, up 3 per cent from 1948 when the previous record was established.

Apprehension is felt in some quarters about the rising mortgage debt. In 1949 the volume of home mortgage debt rose to a new high of approximately \$38 billion. This is about double the amount outstanding in 1939.

Nevertheless, there is now increased mortgage competition and somewhat lower interest rates on mortgage loans. This is the result of the large volume of savings coming into the market, the decline in yields on high grade bonds and the resultant desire of some institutions to switch funds from bonds to mortgages, and the fact that pension and trust funds are growing rapidly and are being invested in home mortgage loans.

How long this trend toward lower mortgage rates will continue depends, in the opinion of the United States savings and Loan League, on a continuation of a heavy volume of residential construction, the rate at which people save money, and the Federal Government's monetary policies.

More and more conventional loans are being made at rates of 4 per cent and 4½ per cent. Nearly all types of lending institutions are making more GI loans and holding them rather than selling them to the Federal National Mortgage Association. The GI 4 per cent rate is looking more and more attractive to institutional investors. Lending institutions have developed very satisfactory working relationships with the offices of the Veterans Administration, and legal questions which prevented some large investors from making GI loans in 1948 and the early months of 1949 have been ironed out.

By the close of 1949 a total of 1,662,867 veterans of World War II (about one out of ten) had purchased homes through the aid of G.I. Ioans. Of these 1,367,980 have made straight 4 per cent G.I. Ioans and 254,887 have made construction FHA GI Ioans. The Federal National Mortgage Association has purchased less than 5 per cent of these loans.

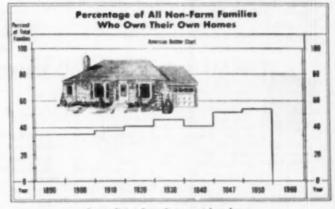
How well builders are serving veterans is shown by statistics on veterans loans for September. October and November, 1949. Forty per cent of the loans made during the period were for the purchase of new houses, 20 per cent for proposed new construction, and 40 per cent for the purchase of existing houses.

Fifteen per cent of the new houses purchased by veterans cost less than \$7,000, 55 per cent cost between \$7,000 and \$10,000, and 30 per cent cost over \$10,000, Average purchase price would be about \$9,000. With construction costs and other living costs about double prewar, this is equivalent to a house at less than \$5,000 in 1939, and a vastly improved house in many respects. During the fifties it appears that financing terms will continue to be relatively favorable for borrowers and a growing volume of homes will be financed by institutional lenders. On the basis of postwar trends, savings associations may be expected to gain importance in the field of home financing.

Out of 2,500,000 home mortgages of \$20,000 or less made in 1949, about 31 per cent were made by savings and loan associations. 6 per cent by insurmercial banks, 5 per cent by commercial banks, 5 per cent by mutual savings banks, 23 per cent by individuals, and 14 per cent by all other mortgages.

Title III housing applications providing for low-rent public housing have poured in at PHA despite record-breaking construction of new privately financed houses.

Applications received and tabulated to date provide for 398,165 dwelling units. Cooperation agreements with local governments providing for tax exemptions have been approved by PHA for 59,410 of the dwelling units. A total of \$35.7 million in preliminary loans have been authorized and \$19.8 million executed.



Source: United States Savings and Loan Langua



MORE CAPACITY FROM LESS POWERI Only the Walker-Turner "900" Radial Saw cuts 31s' deep with a 9' blade-more than most machines with a 14' blade! You get greater capacity with smaller blades (which require less power) . . . and more rim force at the saw tooth, resulting in higher cutting efficiency.



GET THE WHOLE COST-CUTTING STORT-Here's a radial saw you can use right on the building job to speed construction and occupancy. It's a complete machine as shown-there are no "estras" to buy. Does all the radial saw jobs easier, better, and at less cost! Mail coupon for bulletin

describing in detail Walker-Turner's new "900" Series Radial Saw for wood and plastic cutting.

SOLD ONLY THROUGH AUTHORIZED DEALERS

FOR EASY, PROFITABLE CUTTING! It's a pleasure to handle the Walker-Turner "900". You'll like the way you can flick the latches and locks, spin the elevating crank, swing the motor and glide through the cut with so little effort. Walker-Turner design gives you full work visibility ... extra protection in the drop-leaf side guards.

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Cutter

Sam



Dept. ABS, Plainfield	, M. J.				
Please send me the Radial Saw Bulletin,		Walker-	lurner	~900**	Series
Noma	_				

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On and Off the Record

RENT CONTROLS.--They were scored by Cornelius Tewinga, Chicago home builder, recently when he declared that rental apartment shortages in Chicago are the result of artificially maintained rent control.

CITY TAXES—Teninga further stated that removal of rent control would result in increased rents, and therefore, increased assessments for real estate taxes. He declared that an increase of 36 per cent in rents would produce an additional tax revenue of \$22,000,000.

SLUM CLEARANCE—Teninga asserted that every builder favors true slum clearance, but denies the need for public housing. Only 30:800 out of a total of 816,200 dwelling units in Chicago are in need of major repairs. Those statistics he declared to be a far better test of the need of slum clearance than descriptions of hardship cases within the slums.

MAKE UNITS AVAILABLE— Teninga said that 138,000 units out of the 816,200 would be made available if rents were decontrolled, and tenants occupied their dwelling units with the same intensity as is the case with home owners in Chicago.

PORTLAND, ORE.—The Portland Home Owners Council recently presented the mayor of the city with a request for a public hearing before the city council is asked to approve public housing and the tax set-up that would take effect when the houses are built.

TAX ISSUE—The home owners council proposes to block public housing in the city by persuading the city council to reject the tax agreement.

REFERENDUM—Failing in that, the home owners will ask that the matter be referred to the voters in November.

HOUSING VIOLATIONS—In New York the Citizens' Housing and Planning Council has announced an 8-point program to get correction of an estimated 250.000 housing violations. They affect health and safety.

SLUM CLEARANCE—This is the best way to effect slum clearance. In nearly every city in the nation there are already laws, which if enforced, would eliminate slums almost overnight. Added to that a little education

MAY 1950

of people who do not know how to live in houses would go far toward preventing slums.

DEMOLITION—Mere demolition of sum dwellings certainly is no prevention of future slums. The only way to prevent slums is to train people how to take care of dwelling units in which they live, and in the case of restal units—which most of them are—to enforce the law, and make owners conform. Nor is it necessary to demolish most slum dwellings to clear them. Again, it is chiefly a question of law enforcement and education.

MARTIN C. HUGGETT—In his statement to the City Council of Chicago on the public housing issue he said, "Picture the occupants of public housing. The management shovels his coal, clears his walks, cuts his grass, paints his fence and then, to keep him from becoming flabby from lack of exercise, they build him a recreation building so that his leisure hours may be occupied, since he does not have either the problems or the incentive of the home owner. And who pays for all this? His hard working tax-paying neighbor across the way."

DELIBERATE OR STUPID?-

A small group of men and women have gone far to sell the American public on the fallacy that work is done only by those who know no better, and that thrift is unnecessary selfdenial. Whether this small group is stupid or vicious or both remains to be seen. But the ultimate result, if they get much farther is very clear. The result inevitably must be national bankruptey.

GEORGE J. COLES—He is chairman of the Institute of Public Affairs in Victoria. Australia. Recently returning to his homeland from a tour of Great Britain and the United States, he wrote, "The contrast hetween the abundance and prosperity of free enterprise America and the desperate scarcity in Great Britain under a socialist administration is striking . . . free enterprise is a grand system capable of bringing immeasurably greater benefits to the mass of the people than any system of over-rigid socialist planning.

"I cannot emphasize too much the importance of the work of educating our own people in sounder economic thinking."

More Profitable Business For---Contractors!



WATERPROOF Outside Walls of Buildings Above Ground With...



Designed to prevent moistate from entering the pores of concerts, brick, stone and word. Brush or spray on two costs, clear or mixed with any order desired.

Tofsesi Waterproofing is a non-casidizing interval gum, reduced with a volatile solvent which evaporates in a short time, leaving the porce of the treated material permanently waterproofed.

Penetrates surface, protecting against temperature changes, wind-driven rain, alkali or efflorenerse. Prevents absorption of gream, dirt, nord, discuberation maintains original locarty mock longer. Mail composite for compiler indovrnation and

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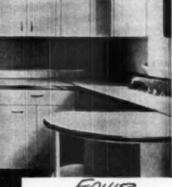


"Electric equipment is what sells them, and the kitchens, of course, have Electric Ranges!"

Mr. Harry LeVelle builds houses in North Chevy Chase, Maryland, for families would not be doing their own work."

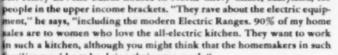
Each of these Capitol City Homes designed by architect Joseph J. Schlosser, has two or three bathrooms, three as five bedrooms, and a completely electric kitchen with a modern Electric Range. They're built on lots of % acre or more, and sell at from \$52,000 to \$45,000. According to Mr. LeVelle, electric living is a "must" in a large home. And according to leading builders everywhere, it's a "must" now in any size home.

Mr. LeVelle is convinced that the MU. Levelse is colvinced that the eleveric kitchen is his greatest sales factor. Note among the appliances that help the homemaker to achieve gracious living, the modern, auto-matic range, and-OF COURSE... IT'S ELECTRIC!





AMERICAN BUILDER



SLECTRIC RANGE SECTION, National Electrical Manufacturers Association, 155 East 44th Street, New York 17, M. Y. ADMIRAL + COCURATOR + CROSLEY + PRODULARE + GENERAL ELECTRIC + GRECH + NOTPONT RELVINATOR + LED + ,MONARCH + NORGE + UNIVERSAL + WESTNOHOUSE

EDITORS' Round Table

A CHICAGO COUPLE recently contracted for the remodeling of the kitchen in the house they have lived in for the past 25 years.

A KITCHEN remodeling contractor was engaged to develop the plans for the new layout, and to do the work. Ten days saw the entire job done, and a Saturday evening saw the couple preparing their first dinner in the new kitchen. The job took them hours, and half way through what had developed into an ordeal for them they both took time out to consider if there might be a way to restore the old kitchen and the old equipment

THE REASON is that the modern sink, the glearning new cabinets, and the unfamiliar storage space for utensils, dishes and supplies caused many unlooked for delays.

AFTER THE MEAL the lady of the house moved, as usual to soak a large broiling grid. But when she tried to get it into one of the two compartments of the new sink she couldn't do it.

"WHAT," she asked, "do I do now? Is it going to be necessary to scrap this grid, and get a smaller one just because the new sink provides no room for cleaning it?"

THEY BOTH took time out again to consider this calamity, and another one which had to do with a can opener which had been mounted on the wall. There was no place that either of them could find in the new kitchen for the can opener. Obviously, some major changes were going to have to be made in living habits and the use of equipment. Was there a way to clean that grid without soaking it or would they have to get another grid? Would they have to give up the convenience of that wallmounted can opener, or was there something they didn't know about that would do just as well?

MINOR IRRITATIONS included the age-old habit, a carry-over from their youthful days on a farm, of having a dipper or cup hanging near the faucet for drinking purposes. There was no place to hang the dipper or cup in the new set-up.

IMMEDIATE REACTION IS that both must be congenital objectors who despise change even if it is good change.

MAYBE SO, but if they are, they are not typical of most people in their (Continued on page 57).

AMERICAN BUILDER



Startlingly different - an entirely new conception --- Fleetlite is the window you have been demanding for years. Engineered and built as a complete packaged window, Fleetlite provides packaged window, Floetlite provides frame, sash, storm sash and screen as an integral unit, easily installed at one time. Home owners like the selfstoring convenience of FLEETLITE its economy, its beauty, its permanence. Already installed in thousands of homes throughout U.S. and Canada.

What people are looking for," says Builder.



A Bernstein

Made by

Wenn today for full details or see your distributor.

Enclosed is an order for Fleetlite windows for an additional group of es which I am starting in the early spring.

After using your windows is all of my building during 1949, I can truthfully tay that the fact that I was featuring your windows accounted for a ready market for my humar and advance orders extending any 1950.

It may interest you to know the recent order extending also 1990. open for inspection for one day, and at that time, such orders for restive additional former, all to be equipped with your windows. As a result I am convinced that the new design features of Fleetine Windows are when people are tooking for even in low-cost homes, and I am therefore planning on using your product exclusively during the coming year.

Many chanks for your good cooperation and prompt service,



With this advertisement in Better Homes and Gardens Westinghouse invites 3,000,000 families to visit YOUR MODEL HOMES DURING NATIONAL HOME WEEK

The full-page advertisement below, to appear in Better Homes and Gardens in September, invites its readers 3,000,000 of America's best families ... to visit model homes ... especially those planned and equipped electrically and identified by the Westinghouse job sign-a sign of quality.

Use the Westinghouse 3-Point Plan to help make your homes more salable by including planned electrical features. The plan includes a free promotion package. G-10096



AMERICAN BUILDER



middle fifties. Because while most couples in their middle fifties have been living according to well defined patterns for a long time, even though many of the patterns may be outmoded, inefficient, and possibly unsanitary, they are not opposed to change.

AND THEY DO represent the age bracket which is the most fruitful as prospects for remodeling of all kinds.

NOW, THIS is no attempt to prove or imply that kitchen remodeling or any other kind of remodeling is bad in that it disturbs older people.

IT DOES, HOWEVER, point to one possibility as a condition to tapping the vast remodeling market. It suggests for consideration that a remodeling project or plan is entitled so the same kind of investigation of personal living patterns as that employed by any good designer of custom built houses before plan and design are determined.

THERE IS EVEN less point in remodeling an old house that people have lived in for several decades, without thorough knowledge of their living habits than there is in designing a new house without that information.

THE KITCHEN remodeling firm who designed and executed the remodeling job in question came up with an excellent plan to cope with a had physical condition, and their work leaves nothing to be desired.

BUT, because they failed to consider what to them were points not worth considering, the owner 'feels now, even with his new range, refrigerator and wall cabinets, that he has spent about two thousand dollars, with the net result that he has a kitchen not nearly as satisfactory as the old one.

THE CONTRACTOR will get no new husiness because of the job due to the fact that his customers, while granting that the workmanship is excellent, feel unhappy, and are not loath to say so.

HAD THE CONTRACTOR spent a little more time looking around the

original layout and asking a few more questions he could have accommodated the little foibles peculiar to this couple, or he could have suggested new procedures to put into operation with the new design and layout.

(Continued on page 61)

There's something SPECIAL about bathrooms when accessories are HALL-MACK

In Hall-Mack's complete selection of bathroom accessories you'll find unique special accessories like these—made to add the final touch of convenience and appearance to any bathroom...



THIS BEAUTIFUL Concealed Lavatory Unit is a perfect companion for all other Hall-Mack Accessories. Soap, tumbler and toothbrush are ready at the touch of a

finger-yet smartly concealed when not in use. These bathroom necessities are mounted on a revolving panel, and only a polished chrome surface flush with the bathroom wall is visible when the unit is closed...

AND HERE IS a three-bar Adjustable Towel Rack - a real spacesaver. It's instantly adjusted to any of three positions (horizontal, 45°, or down) and is ideal for drying hosiery, for displaying guest towels, and for bath towel storage. Drops down out of the way when not in use, yet provides so much extra convenience when needed.

Look FOR all of the extra qualities in bathroom accessories-and you'll choose Hall-Mack! Rememberthere is a complete line to give you the right accessories for every bathroom need. Hall-Mack also makes a full selection of fine Medicine Cabinets and other recessed specializes. Write for details. Hall-Mack Company, 1144 W. Washington Blvd, Los Angeles 7, California. ing 2 position of Irrani Raci

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CCESSORIES

for Every Bathroom

....

Insulite^{*} Bildrite Sheathing

has Twice the Bracing Strength



Let this MILLION pound testing machine tell the story. The event took place in a nationally known experimental research laboratory.

The purpose was to compare the relative bracing strength of Bildrite Sheathing and ordinary wood sheathing in full size walls of standard framing.

These facts are important because lack of proper rigidity in a wall can cause plenty of grief and trouble . . . doors that sag, windows that stick . . . plaster cracks, warped floors. So a good wall must assure adequate bracing strength.

The sections tested were equal in size, 9'x 14', large enough to constitute one wall of a fullsized room. Procedure consisted of applying pressure laterally until distortion would cause plaster cracks, sagging doors, etc. When the machine was set into action, it reproduced in effect the pressure of storms up to and beyond hurricane force. THE TEST TOLD THE STORY!

HERE ARE THE RESULTS:

At 1,021 pounds, the panel sheathed with wood had sagged far enough to cause plaster cracks, jammed windows, sagging doors, etc. But at the same figure, the panel sheathed with INSUITE resisted well within the safety margin! Not until 2,179 pounds of pressure was applied did the INSUITE panel sag as far as the wood panel at half that pressure. Bildrite sheathing provides TWICE the bracing strength of wood sheathing horizontally applied!



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Avoid costly errors with this ... NEW UNIVERSAL Level Transit

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ing and coated optics. Don't wait if you're in the market for a new all-round practical builder's instrument — see the improved new David White Model 3000 Universal Level Transit now

You'll find this instrument properly used will be your best insurance against costly layout and building errors. The new 4½ⁿ protected arc means easier, more accurate readings, less tikelihood of instrument damage through accident. Internal focusing assures you of dust and dirt-free inside lens surfaces, better protection for optical parts and mechanism. Guared optics mean clearec, distortion-free images, sharper definition, positive readings at greater distances and under adverse conditions. Instrument apiedle supported on ball bearings for perfect horizontal adjustments.

Ask your nearest dealer to give you complete information on this and other fine engineering instruments. Or write direct in David White Co., 311 W. Court St., Milwaukee, Wis.

We affer camplete, prampt repair service on all makes of instruments levels, transits, theodolites, etc.





THAT LEADS up to the acceptance by buyers of new homes of radical changes from the traditional in both design and layout.

SHELTER GROUP magazines and the heads of departments of schools of architecture in some colleges and universities frequently complain that the home builders resist modern design features that offer better living.

THE COMPLAINT is not justified. It is not the builders who resist. Resistance stems from two quarters. One of them is the financing institutions, most of whom look upon modernistic design and radical departure from the traditional with a fishy eye. They are unwilling to risk large-percentage mortgages on design that is not fairly consistent with what prevails in a given locality.

THEIR REASON for resisting is not without grounds. They know that the prevailing preference is for something generally following the pattern of the houses in which the home-huying couple have been reared. Often, in the case of young couples who prefer modernism in design and layout the hank hesitates or insists upon major changes, with the idea that the house may come back to them and that quick re-sale will be highly important both in the interest of the lending institution and the defaulting buyer. There is a better chance for quick resale, they reason, with a fairly traditional house than with a highly modernistic one.

THESE CONSIDERATIONS are based on the fact that living patterns are deeply ingrained, and that generally they do not change in the span of one or two generations.

THE OPERATIVE BUILDER, who must risk capital and time on new construction, and gamble that what he produces will find/ready sale, must be as certain as he possibly can that what he produces will meet public approval. He cannot afford to nor is he justified in taking long shots with his own money and the money of the lending institution.

IT ISN'T the builder who quarrels with development of new planning and styling. He can go just as far as the proponents of development can educate the public to accept that development. W. G. GOUGH knows what sells... and it takes ADEQUATE WIRING



W G Gough wort known bocomment Builder soger By including control Adequate Warney in my homes 1 an assuming my home Buyers of maytrial addistantion hadry and homescanaw and myself at hodry and homescanaw and homescan.

Houses sell tester when they're planned for electrical living. Here's why:

Millions spent in appliance advertising have convinced prospective home purchasers that electrical living is for them.

Make the wiring a selling point. You must wire anyway. Adequate Wiring is one of the least costly "plus values" you can add to clinch sales and outsmart less acute competitors.

Use this selling teel. For Adequate Wiring information and other sales help,

Just use the handy coupen.



Solling's Loss Tiring With Adoquate Wiring

.......................

National Adoquate Wiring Bureau

155 East 44th Street, New York 17, N. Y. Please pat me in touch with the nearest local Adequate Wiring Bureau. Fm interseted in giving my house more safes appeal.

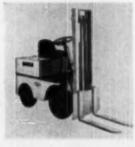
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41



NEW PRODUCTS Offered by Manufacturers

FORK LIFT TRUCKS 4451011 is FA-20-24 and FPA-20-24 forb lift trucks with 7720 and 2600 pound capacity are rated at a 24-unch load center. Standard most of new much has collegeed height of \$4% inches with



in \$5-inch lift. Two speed forward and two used reverse transmission, single hydraulic tiltraise lower control lever, and gear shift levers mounted an steering column. Design changes include new steering note, solid carriage plate. larger diameter steering tires, and interchange-able masts. The Buda Co., Dept. All. Horvey,

WOODWORKING VISE A855023 Woodworking vise, the Verso Vise can be placed an its steel post-type base for use in right or left horizontal, as well as vertical pastion, and he turned to the most convenient di-



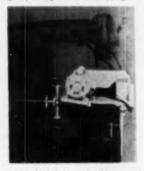
rection for the job to be done. Locks in position on base automatically when pres are tightened upon object to be held. Widest co-portity is five inches and vise can be used effectivaly on material of any thickness up to 5maximum Mode of cost semi-steel Weight, 16 pounds. Holding surfaces are 3% -thes wide by 31/1 inches deep. The Will Burt Co. Dept. A8, Orrville, Ohio.

HOUSE-MOVING TRAILIR A855013 Super-Hauler, No. 246347, affers sale means for rapidly maxing houses, or large and and ward equipment components. Operates similar te ardinary full trailer. Main frame pirders are separate units and are easily placed in any desited position under a house, after clearance is pinoided Flexibility of assembly permits structure to be amply supported at critical weighted point. Once placed under a load, complete frame and burden are raised in a single effort.



When spised, adjustable pneumatic-tired wheels are placed in position. Schuette Builders Co., Dept. AB, Wausau, Wis.

RIP FEED ATTACHMENT A855021 Power rip feed attachment for radial may be attached quickly and securely with two mounting brackets supplied with unit. Design of unit enables operator of som to use it for straight rip sawing and for bevel ripping, mold-



ing, power feed shaping, plaughing, grooving and rabbeling. Unit may be maved quickly out of the way when power feed work is completed. Hand operations may be resumed without delay Equipped with adjustable feed rollers for feed ing material into cutter and taking cut ma-terial away. Attachment fits mast radial sawa DeWalt, Inc., Dept. A8, 13 Fountain Ave., Lan constant Pis-

WOOD AUGER BITS A855007 Wood auger bits for use with electric drills are in 13 sizes from 1% unch to 1 inch alable Also packed in two handy sets of 6 and 13

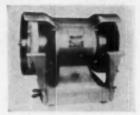


bits each. Suitable for all industrial uses and ideal for carpenters, contractors. Made of chrome alloy steel, accurately hammer forged Accurately centered by procision machinery Murar bright finish. The Midway Tool Co., Inc., Dept AR Melvie, Ohio

BENCH GRINDER

A855009

"Home-Utility" electric bench grinder is Six-inch powered by Black & Decker 1/4 H.P. moter, and supplied with general purpose grinding wheel and wire wheel brush. Can be equipped with different grades of grinding wheels and with



ray but ateris to butting and polishing. Adjustable tool tests, and wheel guards cost in tegral with motor housing to give ample protection. Rotor and wheel spindles mounted on full-size ball bearings covered by sleaves to protect them from dust and grit, Weight, 31%, pounds. The Black & Decker Milg. Co., Dept AB. Tawson J. M.d.

BUCKET LOADER

A855007 Pneumatic-fired Model 543 bucket lander has a 15 M.P.H. road speed, and truck type warm and roller for steering that allows easy mo neuvering in cramped places. Economical for truck loading, the laster is ideal for aggregate producers and material yards. Two forward and two reverse speeds. Automatic load trim ming, Barber-Greene Co., Dept. AB, Aurora, III

NAND TRUCK

A855034

"Tricart," a lightweight tubular steel hand truck, has adjustable tripad support and lever age plate that makes loading easy. Weighing 17 pounds, the Tricart handles loads up to 600 Telescoping tripod is adjustable munds.



stantly to any position for maximum ease of wheeling. Third wheel assembly can be folded completely out of the way, to permit use of track as a two-wheeler when desired. Two-models are available. Model A stands 45 inches high, has three rungs, Model B stands \$2 inches high, has four rungs. Melooz Manu facturing Ca., Inc., Dept. A8, 4730 Avalan Bivd., Los Angeles, Calif.

(Continued on page 64)

Alizadas runni muniti 1 NATIONAL LOCK WHO'S REALLY IN BUSINESS - AND PROFITABLY No. - N-150 - Colones Hardware who is not the . No. - 77 Wand Street Actor Mo. - N 56" (e) & Ann Participation Factor Ministration ALL SAY "GIVE WE NATIONAL LOCK" scordingly. Builders who count on NATIONAL LOCK herewere find in each extre desirebility in finant to their declars. And these jobbers profit the minds of prespective home purchasers. Is why in an extensive line of estatunding herdwore! dealty you look to MATIONAL LOCK for the utiline DISTINCTIVE HARDWARE ... ALL FROM SOURCE clure of a widespreed acceptance. Jobbers who feature peel of NATIONAL LOCK products cosh in on this Regerdness of how you utilize NATIONAL beelers who take edvecings of the popular ap-KARIOMAL LOCK know they're providing the very OCK merchandles, you're "in business" predhuhly MAY 1950 43



(Continued from page 62)

LIFT TRUCK ASSOCI Induced 20, a 2,000-pound capacity lift trick, a preserved by new Wiscensin air comised engine designed to withstand great extremes in exatter conditions. Engine accessory informements acuted larger extensitive-type bartery.



a re-designed muffler with spark arresting features, and larger gasaline tenk to permit eightbaur work shifts without refiling. Uprights, lawer in height than as the old 20, are now mounted an an extension of truck frame rather than to transmission case. Will prive foreword to life front wheels clear of ground for changing tras ar servicing power unit. Hyster Co., Dept. A. 2902 N.E. Clarkows Sr., Partland B, Che

LONG WEARING BLADES AB35018 Sail Carbalay-Tigged blades will cut lender an long as 500 hours without rethanpaningfor use with 2% insh and larger Sail Sams only, blades are recommended for heavy duty geng cutting of all lumber and for accurate cutting of such materials as Cemesto board, Asbesto sceneer board und Insulfrick Available in 7-inch diameter with 18 teeth and Sunch diameter with 20 teeth. Skiltare, Inc., Dept. Al, SOJS Etton, Chicago, III.

POWIR SHOVIL A835010 Hydrauliaelly-operated "Scoop-Shorel eliminates movael shoreling when scoopen, lifting, naving, and dumping sand, coal, gravel, or other materials. Scoop-Shorel accessory is drteched easily to the Lift King and Warksaree



electric and yas fork trucks. Handles up to 27 rubic feet of material. Tills upwards from haribintal scalinging position to confit lead during transport, and filts downward to discharge load when during focops of ground level or digs inco piled material. During at height up to 130 inches. The Yale & Tawne Manufacturing Co. Philadelphia Div., Dept. AB, Roosevelt Bird. Philadelphia 15, Po.

ACCESSORY TOOLS

Production tools for doubling, proving and shaping wood include a doub and saw shaper band, one 7 inches in diameter by ½ inches thick for light work, one 7 inches in diameter by ½ esthabut for heavy work, and one 9 inches by ½ for radial type saws. The first two are for table saws. The heads are cadmant pioned; offered in standard arbor halo sizes from 1/2 to 11/2 inches. New type safety shaper



collars in 2% and 3-inch diameter are also affered Jer Taol Sales, Dept. All. P.O. Box 217, Point Lame Station, San Diego & Calif.

ELECTRIC PLANTS

Electric plents for use as a sole source of current in places not reached by central station service, provide portable power for many kinds of jobs, or current for stand-by or emergency



uses. Equipped with carrying handles, the 350watt plant weighs 70 pounds. Can be transported in trunk of a car. A longue model for portable and semi-portable uses is available. This plant, 750 watt, 115 wolt, AC model, will operate 30, 25-watt lights at one time, and various power took with motors not exceeding V, H.P. Rohler Co., Dect. AB, Rohler, Wis.

1

4

A855020

POWEE PLANE

A355015

Guild Flane, Model 101, has interchangeable motor which can be quickly transferred to Parter-Cable's Guild router, eaving cost of



additional motor unit. Maximum cutting width, 1.13/16 inches allows its use in construction from outvide doors to finish trium. Operates at 20,000 R.P.M. Weigle, B peunds. Can be converted into singler ainter, and also serves as a portable moulding sione when spiral cutter is replaced by shaper cutters. Parters Cable Machine Co., Dept. AB, Spracuse B, N.Y.

FLOWER BOXES

4855019

A855032

A855024

Leigh flower bases help dress up a house by their colorful appearance. Finished and ready to install, they are lawlin of heary gauge steel, zinc coated, banderized and finished with two coats of baked ename!. Front and back edges are hearing reinforced. House in bottom drain excess water. Furnished in green, blue or tile red ename!. Length, 30 inches. Air Control Products, inc., Cept. AB, Coopersville, Mich.

FLOOR VISE

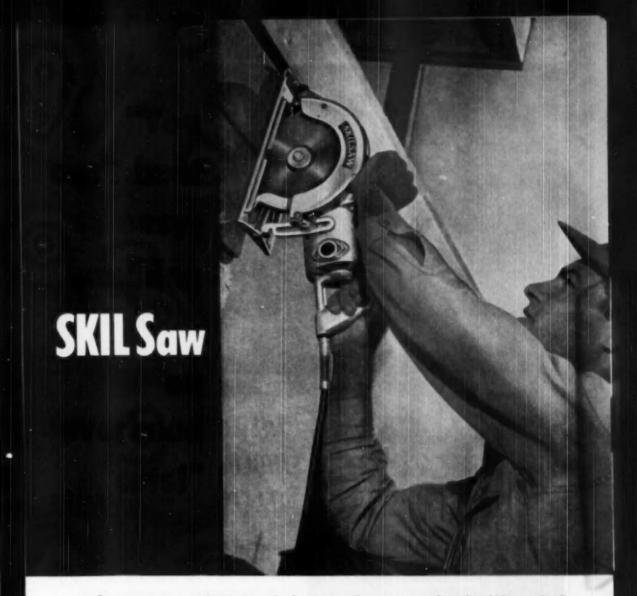
Drop Klamp floor vise holds heavy dears, windows or plywood sheets firmly in vpright postion. When door is dropped into unit, weight of door octuates vise to hold it firmly for plan-



ing ar sawing, hinge and lock work, fitting door knobs, and other work. Fiberbaard liner prevents marring of polished surfaces. Made of 12-gauge steel, it is 91/s7 inches, and weight 5% pounds. Lakeshare Manufacturing Co., 428-H, Dept, AB, 2nd Ave. S., Minneopolis 1, Minn. (Continued in page 136)

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When you address inquiries direct to manufacturers concerning a new product described have, please montion that you saw it described in American Builder



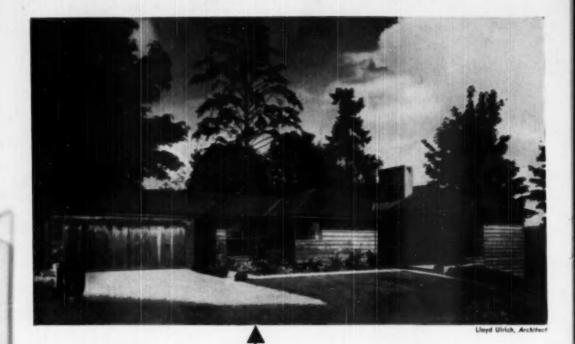
And on every cut SKIL Saw balance and power make the job easier!

Try SKIL Saw on the tough cuts. Learn what easy-handling really means. Take SKIL Saw with you up on the job. On overhead work SKIL Saw's *two* handles mean safer, more positive control. On the simple cuts, SKIL Saw leaves one hand free for materials handling. And SKIL Saw, not you, does the work. SKIL Saw's power and durability make it tops for all construction sawing. Choose from 9 hard-working models with capacities to 41% inches. Ask your SKIL Tool Distributor to demonstrate easy-handling SKIL Saw today.



SEE products one mode only by SEELSAW, INC.. SO33 Bloken Area, Christope 30, IB. Pactury Branches In Principal Other In Canadia SEETOOLS, UP, 66 Partiend St., Termite, Ook.





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- TELEPHONE OUTLET

THE BEST LAID PLANS INCLUDE TELEPHONE RACEWAYS

Concealed telephone wiring is one detail today's home buyers inquire aboutand appreciate.

Built-in telephone facilities involve little work, little cost. Just mark locations for telephone outlets on your plans. Then, during construction, a few lengths of pipe or tubing can be built into the walls to carry telephone wires to the outlets.

Your Bell Telephone Company will be glad to help you in planning telephone wiring facilities. Simply call your nearest Telephone Business Office and ask for "Architects and Builders Service."



ELL TELEPHONE SYSTEM



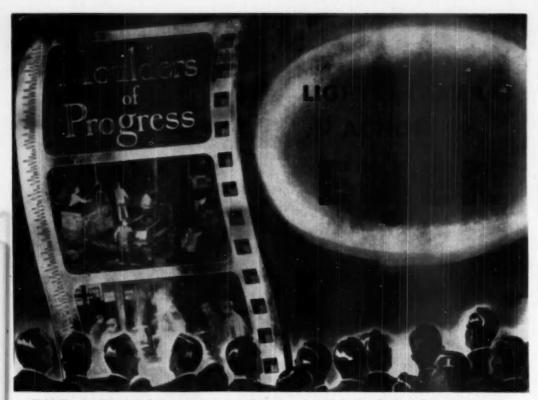


This well-known Richmond Seel, proudly attached to overy unit shipped, is your guarantee that Richmond standards in design, materials and craftsmanship are rigidly maintained.

Model SG-Gravity Warm-Air Unit-Made with heavygauge steel heat exchanger-finished in light-green hammertone baked enamel. Easily assembled. Simple, economical and trouble-free in operation. Made in two sizes: 70,000 and 90,000 Btu input per hour. A.G.A. approved. Medel SU-Forced Warm-Air Unit-Sturdy, roundedcorner casing. Made with heavy-gauge steel heat exchanger and finished with a light-green baked enamel steel jacket. Shipped assembled; two sizes: 85,000 and 110,000 Btu input per hour. A.G.A. approved.

Both Units Made in Two Sizes...giving you four new GAS-FIRED, highquality, efficient heating units, ideally suited for use in low-cost competitive homes and home developments. Use the handy coupon at the lower right to get detailed data and specifications.





THE NEWEST MOTION PICTURE OF ITS KIND!

"Moulders of Progress", the new 30-minute Eljer motion picture in full color and sound, shows the spectacular methods by which plumbing fixtures and brass fittings are manufactured in Eljer factories. Never before has this "inside story" been told in such a fascinating manner.

Already at more than a thousand showings ... in the building industry and to the public ... people everywhere have marveled at the production achievements that make sanitation in the home possible. And public interest in this beautiful film is tremendous. You can borrow a 16 mm print of "Moulders of Progress" without charge for showing to your trade association, club, school or any group meeting. Simply see your Eljer Distributor or write direct to Eljer Co., Ford City, Pennsylvania.



It pays you, it pays us - because we specialize in Plumbing Fixtures and Brass



AMERICAN BUILDER







NAHB Executive Committee Appointees Announced

Appointments to the NAHB executive committee have been announced by President Thomas P. Coogan. 1950 comnittee members are: President Coogan, Rodney M. Lockwood, Detroit, 1949 president; William P. Atkinson. Oklahoma City, first vice president, Alan Brockhank, Salt Lake City, second vice president; Nathan Manilow, Chicago, treasurer; Joseph Haverstick, Dayton, Ohio, secretary; Paul Burkhard, Glendale, Calif.; Frank Burns, Denver, Colo ; George Goodyear, Charlotte, N. C.; R. G. Hughes, Pampa, Texas; B. A. Martin, Atlanta, Ga; O. G. "Bill" Powell, Des Moines, Iowa; and Emanuel M. Spiegel, Passaic, N. J.

In addition to the executive group, Coogan appointed a President's Advisory Committee, with provision made to increase or decrease membership as needed. Named to this committee were Fritz Burns, Los Angeles; Edward R. Carr, Washington, D. C.; Robert A. Bready, Battimore, Md.; William B. Dixon, Jr., Pirtsburgh; and W. Hamilton Crawford, Baton Rouge, La.

Interest Remains High In Dealer Conventions Throughout U. S.

Reports from dealer regional and state conventions held in all sections of the country indicate that attendance has remained at record or near-record marks. There are in many cases more exhibitors this year and a greater diversity of exlubits.

As in previous conventions since the war, much attention is given to legislation before Congress which affects the industry. Increased emphasis is also being placed on group discussions of business operations, with convention schedules calling for an increasing number of these sessions.

Summaries of activities at nine of the meetings are given below :

Ohio

Emphasis at the 69th Annual Convention and Exposition of the Ohio Association of Retail Lumber Dealers was placed on the need for low-cost housing and the preservation of the free enter-

(Continued on page 72)

MAY 1950

Thus far, three committee chairmanship appointments have been made. They are : Legislative Committee, William P. Atkinson : Public Relations Committee, Alan Brockbank ; and Education and Public Relations Campaign Committee, Fritz Burns, Burns has already discussed public relations objectives at several association meetings.

'Log Cabin to Budget Home' Theme of Chicago Show

The Greater Chicago Home Fair, to be held at the Chicago Navy Pier May 13-21, will stress accomplishments in living comforts and conveniences during the past century. The home show is sponsored by the Chicago Metropolitan Home Builders Association in cooperation with the Chicago Herald-American. Successive steps in home progress, "from the log cabin of 1850 to the budget home of 1950." will be dramatized.

Detroit Builders Sponsor 'Sons Banquet'



GROUP at "Bons Banquot of Builders Association of Metropolitan Detroit, Edmund

Ruhlmon, director and member of the executive committee, served as spansor for the event

Departing from the usual father-andson banquet custom, the Builders Association of Metropolitan Detroit recently held a complimentary dinner for 50 "bildor" members, associated with their fathers in home building.

Idea for the meeting was proposed to the Detroit Association by Edmand Kuhlman, Detroit builder and a director of NAHB. Said Kuhlman, "These young men will, before many years have passed, he the "bildors" of the Detroit Metropolitan area. Upon their shoulders will fall the full responsibility of maintaining the private-enterprise system in the housing industry. It is necessary, therefore, to begin at once to draw them into the Association activities and inculcate in them full realization of the important nart played in the community by the Builders Association, and of the need to maintain high ethical standards and progressive policies in the home-building industry locally and on a national scale.

Since the meeting, the first of its kind to be held under the auspices of the local association, was for soms only—fathersy were barred. At the speaker's table were Earl C. Doyle, managing editor of the Detroit Association's official publication, the Bildor; Henry F. Fett, past Detroit Association president; Kublman; John Weinhart, Detroit Association president, and Wallace A. Colwell, Detroit Association executive secretary. But no speeches were made. The get-together was "strictly for the sons."

NAREB Leaders Visit Europe

Robert P. Gerholz, Flint, Mich., president of the National Association of Real Estate Boards, and Herbert U. Nelson, executive vice president, recently returned from a two-week visit in Great Britain, France and Belgium, where they studied property management and all phases of home building and real estate.

Cy Sweet Says-



C. B. SWEET, President, National Retail Lumber Dealers Association

Are you a LIFTER or a LEANER?

This question is a most timely and significant one because we all know that during recent years an alarming portion of our population has joined the ranks of LEANERS, people who have come to lean upon the government for support. Most of these citizens have been misguided through misinformation, and through unadulterated demagoguery, to believe that perhaps it is the function of government to furnish all kinds of props upon which they can lean for support.

Our forefathers, literally speaking, litted themselves up by their boot straps from a condition of social, religious, and economic slavery and tyramy, to a position of free men and women. When they fought for their independence they were not merely protesting against a tax on tea. They were fighting for a mobler purpose, they were fughting for the right to choose their religion, their job, their profession, their purchases, and to be free to enjoy the fruits of their labors, ingenuity, and abilities.

Out of this, ultimately, came the unparalleled achievement of 7 per cent of the world's population, producing more new wealth than all of the other people in the world. It was achieved through the spirit and philosophy of the people wanting to be LIFTERS.

Unfortunately, in recent years a new philosophy has come into being, ushered in by expert planners. These planners said, "Why tire yourself trying to lift, there is a better and easier way, let the government give you a prop to lean on." The props were named—Social Security—Public Housing—Public Medicine—Public Housing—Public Medicine—Public Power and Federal Education.

The planners, however, neglected to tell the people that the props they were offering would cost billions of dollars, continued deficit financing, and ultimate bankruptcy of the goveroment. They further neglected to say that the priceless heritage of personal freedom was being traded for these props.

The time has come when we must all again band together and, like our forefathers, become LIFTERS, in order to check the forces intent upon making this a country of LEAN-ERS. We must never forget that this nation was not built by LEAN-ERS, but by LIFTERS.

Joseph Quinn Named to Staff

of Long Island Institute

Joseph Quinn, past vice president of the American Gas Association in charge of industry, and for 25 years industrial and commercial sales manager of the



JOSEPH QUINN

Brooklyn Union Gas Co., has been named assistant to Otto J. Hartwig, executive secretary of the Long Island Home Builders Institute to fill the place of Lorenzo Pando, who died last December, it has been announced by Leonard L. Frank, president of the Institute.

A native Long Islander, Quinn, who lives in Freeport, N. Y., has been engaged for the past five years in trade association work. Having studied at Massachusetts Institute of Technology and Columbia University, he is an industrial fuel engineer by profession and is a past president of the Brooklyn Engineers Club.

49 Complete Short Course In Lumber Yard Operation

A dinner honoring 49 graduates climaxed a short course in retail lumber operation and merchandising conducted by the University of Massachusetts, Amherst, under the aponsorship of the Northeastern Retail Lumbermens Association. The dinner, at which certificates of completion were awarded, was held recently at Amberst and was attended by a number of Association members and college officials.

This was the tenth institute of its kind

Business to Double in '50, Perlite Institute Told At Semi-Annual Meet

Wharton Clay, secretary-treasurer of the Perliste Institute, told members attending the semi-annual meeting that their industry will expand 250 per cent during 1950 over 1949 production levels. The dollar volume of business to date exceeds \$2,350,000.

More than 80 members of the institute, miners, manufacturers, and fabricators of peritic, met for the third semi-annual meeting at the Knickerbocker Hotel, Chicago, March 14-15 to discuss the future of their rapidly expanding trade-

Among the speakers at the meeting were Dr. Lansing S. Wells, Chief of the Plastering Section, National Bureau of Standards, and P. H. Peterson of the Technical Branch, Housing Research Division, Housing and Home Finance Agency.

Peterson recently prepared the exhaustive study. Lightweight Aggregate Converter, published by the HHFA. During the session he stated that "We are interested in the development of lightweight aggregates because of their promise to reduce costs of construction, improve insulation values and lighten the weight of the structures. This may be brought about by the use of lightweight aggregates in roofs, concrete floor slabs and in gypsum plaster and possibly other ways."

The institute was organized in April, 1949, and held its first meeting in September of that year. Its purpose is to share technical advances among the members, to publicize the advantages of perlite, and to effect standardization and economies for the benefit of the builder and building customer, Wharton pointed out.

The directors of the Perlite Institute are: T. C. Carter, president; J. Don Alexander, vice president; O. N. Gregg; C. H. Hall; and S. W. Johnson.

President Carter stated that the advances to date mude by the member companies of the institute have been very satisfying and that the technical data for presentation to the building industry is being rapidly gathered.

Other speakers and advisers attending were: D. M. Catton and C. M. Carlson, Portland Cement Association; E. M. Lurie, national director, National Foundation for Lathing and Plastering ; E. D. Quantrom, Lathers' Union; Thomas Dowling, Chicago Plasters' Local; Byron Dalton, Chicago Plastering Institute; Joseph McNulty, plastering contractor; and Henry Penn, district engineer, American Institute of Steel Construction.

sponsored by the Association. Students heard more than 200 hours of lectures and received approximately 165 publications related to their work.

Certificates were awarded by Dr. R. A. Van Meter, University president, John W. Dain, president of the Northeastern group, made the graduation address.

John Weinhart Elected President of Detroit Builders Association

John Weinhart was recently elected president of the Builders Association of Metropolitan Detroit at an election meeting of the Board of Directors held in the Detroit Harmonie Club.

Other officers elected were Edward Rose, first vice president and chairman



JOHN WEINHART

of the executive committee; Frederic W. Gerhardy, secretary; Gustav F. Scheurman, treasurer.

Four vice presidents were also elected, including Carl Lundblad, Edward Pratt, Norman A. Burns and James Rossin.

The new officers will serve an annual term or until their successors are chosen. Officers of the association are elected by a 30-man Board of Directors.

Oklahoma A. & M. Offers 4-Year Dealer Course

A new four-year course for building material dealers will be included in the 1950-51 corriculum of Oklahoma A, and M. College, Stillwater, college officials have announced. The course will lead to a B.S. degree.

The educational committee of the Oklahoma Lumbermen's Association, consisting of Chairman R. A. Parker, Ponca City; Bud Everitt, Einid; R. O. Fox, Stillwater; Walter Kelly and Dale Carter, Tulsa; and W. M. Morgan, Association secretary-manager, conferred with school officials in planning the courses, which will be offered for the first time next September.

Field Secretary Appointed by Columbus Group

Robert R. Davis has been appointed field secretary of the Columbus, Ohio, Home Builders Association, the Association president, J. Alfred Shuman has announced. Davis, a Columbus resident, will work on membership, call on builders, assist with promotions and publications.

A World War II veteran, Davis has had real estate and hanking experience.

MAY 1950



YOU GET THE KIND OF GOVERNMENT YOU DESERVE

Washington is the craziest place in the world.

Cortright's Column

FRANE W. CORTRIGHT. Esecutive

Vice President, National Association of Home Builders of the United States

At the same time, it is the capitol of the world, and your welfare and that of the generations to come is in a large part dependent upon the decisions made here.

After eight years of constant work with the Congress, with the administrative agencies of government and with other trade association groups, I find it an increasingly difficult and challenging place. It is challenging placause the governmental machine grows bigger day by day and it is difficult because our competitive capitalistic profit-earning system is being replaced with the ideology of the "Social Welfare State."

One peculiarity of Washington is that people who come here to work invariably change. Before long they become important or unimportant. Many politiciarity become Ponderous, Pompous or Pontifical. Some Parlor or Penthouse Pinks become outright Reds. Crusaders become Profound Protagonists of various causes.

As in every city, there are the Poor, the Pathetic, the Powerful, the Patient and the Pitiful, but all of them before long become POLITICAL. It is a characteristic of everyone in Wushington to play the game of political expediency, logrolling and a variety of tricks.

Endeavoring to work through all this welter of legislative and administrative currents are literally thousands of representatives of religious, agricultural, industrial, educational, veterans and labor organizations.

It is tragic that through the years, the term "lobbyists" has taken on the connotation of slyness and evil intent. The fact is that the legislative body of our government never has—and never can—function satisfactorily without the information supplied by these representatives of organized American life—these lobbyist.

I know of nothing more unfortunate than the fact that the American people have been misled in this respect and have, as a whole, failed to become lobbying individually and support the lobbying who are honestly trying to influence legislation in a practical and constructive manner.

As a people, we have a childishly naive belief that someone else will select and elect good Congressmen and Senators. We vote for party candidates because we like their photographs or oratory. After election, it never occurs to us that they must vote on hundreds of issues each year, and that their votes will be cast the way a small vocal minority of the constituents suggest.

Those of us who endeavor to be constructive and effective lobbyists succeed only as our membership responds to our request for constituent influence on their elected representatives.

Reducing this to simple language, it means that if you do not take time to send good men to Congress—and if you do not advise these men from time to time regarding the facts of the legislative problems before them—you will get bad lave!

A sufficient number of bad laws will eventually weaken your business no matter what it is—will give you an insupportable tax load and, worst of all, will eventually destroy the free enterprise economy under which we as a nation have so greatly prospered.

Therefore, I say to you, that no matter what you think of Washington—and "mad house" is the term I most often hear applied to it—do not forget that it is the place in which the future and safety of our economy and our nation is located. It is peopled with and run by fallible human beings just like you and me—from the White House down to the humblest hureaucrat. It is your job and your responsibility, along with 148 million other American citizens to be concerned with it and to do something about it—we can only be as successful in serving you as you make it possible for us to be.

IN OTHER WORDS, YOU WILL GET THE KIND OF ECONOMY AND THE KIND OF NATION YOU DESERVE!

Dealer Conventions

(Continued from page 19)

prise system. An estimated 4,000 persons attended the Jan. 24–26 meeting at Cleveland's public auditorium.

C. B. Sweet, NRLDA president, spoke on the government's present housing program. Other speakers included Don Beaumost, president of the Cleveland Lumber Institute; Chester C. Kelsey, manager of the Asbestos Cement Products Association; and Harrison Wood, radio commentator.

An innovation was a "Top Management Breakfast," at which an open disrisation was held of dealers' problems. Howard Potter, Worthington, was moderator.



JOHN M. HORN

John M. Horn of Hamilton was elected to serve as the Association's 1950 president, succeeding J. Irvin Jones, Columbus. Completing the officers' roster are: William M. Stine, Bryan, first vice president; James E. Clemens, Youngstown, second vice president; Allen Brain, Springfield, treasurer; Findley M. Torrence, Xenia, secretary; and Charles E. Benson, Columbus, field secretary.

Wisconsin

All previous attendance records were broken at the 60th annual convention of the Wisconsin Retail Lumbermens Association, despite bad weather throughout most of the state. 3,084 registered for the meeting, which was held Feb. 14-16 at the Milwaukee auditorium. The record for number of exhibits was broken when 196 were occupied by 177 exhibitors.

Other record-breaking marks were 450 persons at the Royal Order of Dumb Bells' huncheon, 394 men at the Hono-Hono party and 394 persons at the dimmerdance. Among the guests of honor was Mrs. W. O. Hoffman of Fort Atkinson, who was attending her forty-aisth consecutive convention.

Attendance at husiness sessions was equally good. Among the speakers were Clyde A. Fulton, NRLDA vice president : Edward G. Gavin, *American* Builder editor ; W. H. Schnidt, Jr., transportation editor, Raibway Age ; C. W. Wright, Toronto, Canada, sales consultant : Harrison Wood, radio commentator ; and G. F. Hoppe, sales pro-

100,000 Visit Seattle Show



VIEW of section of Seattle Home Show. Throng of visitors is example of high attendance.

Approximately 100,000 persons visited the 1950 Seattle Home Show and Household Fair, sponsored recently by the Seattle Master Builders Association and the Seattle Post Intelligencer. The nise day event was held in the new field armory.

One of the show features was a 1,650 square-foot model home designed by John

 Mattson which presented unusual treatment of plan, materials and equipment, [Rendering and floor plan of Architect Mattson's model home are shown in back pages of this issue.]

A "Dream Home" contest for house models also attracted wide interest. The competition was open to all persons except professional architects and builders.



R. E. NUTUM

motion manager, Insulite Division of Minnesota and Ontario Paper Co.

Re-elected to office were R. E. Nuzum, president, Viroqua; H. P. McDermott, secretary, Milwaukee; and J. E. Richardson, treasurer, Sheboygan Falls.

Southwestern

Dealer discussion groups were one of the most popular features of the 61st annual convention of the Southwestern Lumbermen's Association, held at the municipal auditorium. Kansas City, Jan. 25-27. Registration for the meeting was 3,162 and there were 159 exhibitors.

The 12 discussion sessions included such subjects as "Financing Home Construction," "Advertising and Public Re-

(Continued on page 160).

Press, Radio Luncheons Prove Good Association Public Relations Activity

An experiment in public relations by the West Coast Lumberman's Association has shown outstanding results according to a recent statement by Association officers.

"One year ago," the statement said, "the Association invited radio and newspaper people to luncheons in our two largest centers of population (Seattle and Portland). We found that they welcomed the opportunity to get together unsder outside sponsorship. It was understood that we were not after direct publicity from the meeting, but that our purpose was to supply information on the situation and prospects of the region's most important industry. Questions were invited."

The story at that meeting was of the success of the Association's advertising and promotion work for the economy grades of West Coast lumber—particularly its marked effect on the solution of the problem of increasing forest utilization.

"We left these moulders of public opinion convinced that the progress shown in this phase of forest conservation was a certificate of the permanence of the West Coast forests and humber industry." the statement continued, "and that socialized forestry is not needed."



The homes you build are sure to make a hit with owners..., when you use Bruce Block Floors. They are unsurpassed for beauty, durability..., and smart, modern design. And homes built for sale move faster when prospects see these distinctive floors.

Bruce

Bruce Blocks are ideal for modern construction . . . can be laid in mastic directly over concrete, or nailed over wood subfloors. Where prefinished Bruce Blocks are used, there's no sand, ug or finishing on the job . . . a big saving in time and money.

See our new catalog in Sweet's Builders' File. Write us for literature and information that will show you how Bruce Blocks can give your homes new floor appeal.



Product of E. L. Bruce Co., Memphis, Tenn., World's largest maker of hardwood floors

Take it from these SUCCESSFUL builders!

Prominent builders all—and all choose Kelvinator products for their projects. Again, each man's choice is based on long years of experience. And each man points out the beauty, dependability, user-acceptance and

low-maintenance costs of Kelvinators over the years. For full information, write to Department AB. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



What Price Freedom

D

W HAT can the home building industry afford to spend on public relations? How much is it worth to awaken the public to the danger of the drift toward national socialism, clearly exemplified by the public housing bill passed by Congress last year? How much is it worth to arouse the workingman and the small home owner to a realization of the fact that the price of public housing, public medicine, and government ownership of railroads and utilities is individual freedom and government confiscation of private incomes through exorbitant taxes, wastefully spent by Washington bureaus?

What is it worth to make the American public realise that every time any man sends one dollar in taxes to Washington to feed socialistic bureaus, only a fraction of that dollar ever returns, and that in the form of alleged benefits of extremely questionable value to anyone? What is it worth to prove to the public that government paternalism is no different than any other kind of paternalism—that it means control, direction and regimentation of all individuals? What is it worth to arrest the present drift to economic calamity and individual subservience to big government with an array of simple facts, plainly told?

Probably no one will know what it is worth until and unless the opportunity to appraise the value of what is at take has passed. There are, however, some criteria, and there are some concerted and successful efforts being made to devise and finance programs of public education. In Chicago the home building industry—all segments of it—through the offices of the local home builders association raised \$25,000 entirely spart from dues to any association for a public educational fund to be spent locally. In Seattle the industry raised enough to tell the voters the hoax of public housing, and defeated it there in a referendum vote, 57,732 to 33,529. In Yakima similar action defeated public housing seven to one. In a host of other cities comparable results have been obtained.

The fact that public housing has been beaten in many cities by referendum, permitted but not prescribed by law, does not mean that the issue is settled in those cities. The proponents of big government and socialism are well organized and well financed. The battle, now at the grass roots level, has only really begun in earnest.

The champions of freedom will have to fight at both the national and local levels, and will have to fight with money as well as effort.

What is it worth? It is worth that price at which every man in his own mind values his birthright and the birthright of his children. It is worth what every man believes is the worth of the sacrifices that have been made since 1776 to create a nation dedicated to the cause of individual freedom and the personal incentive of free enterprise that gives every man his chance. The issue is clear. The question is whether this generation chooses to reach into its pockets, and to spend its time and effort to guarantee its children the same freedom and opportunity that it inherited from its forefathers.

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Boary offset will be made to return material submitted for possible publication (if promponied by stamped, addressed envelope), but the aditors and the corporation will not be responsible for less at damage.

Premotional idea aimed at stimulating local interest in new Herrick Park project mushrooms into state-wide publicity







R. S. MOORE. loft, and R. W. Herrick at opening day of Herrick Park. Tecumeeh.

EDITOR'S NOTE: Due to the significant rate power tools and equipment are playing in the atteinment of today's housing recard, American Builder again takes the reader on the jab to see how these tools and equipment are used to save time and maney...

In this ago of solver-cod technology when the key word is power, and methods of labor by hand are disappearing — slowly in many cases, faster in others. In some cases the transition from no power tools and equipment to a few has been so gradual that the builder himself cannot give an exact date for the changeover. In other instances, the change has been everyingt — as quickly as a builder could be convinced that the change meant dollars saved.

The following stories effer convincing proof to the builder — that madern power tools and equipment can save maney; and that they are playing a leading role in today's housing achievements and in tomerrow's plans. SALESMANSHIP days of Baroum and Bailey may be gone forever, but their dynamic showmanship is far from forgotten. These master promoters would have liked an outburst of enthusiasm shown not long ago in Tecumseh, a small Michigan town with large ideas. Motivation for an unusual event came about when a local lumber dealer, R. S. Moore, faced the job of promoting construction of a 180-house project.

Because of a liberal offer made to citizens who would build on a tract of land provided, promotion promised not to be a difficult task. But Mopre, with a flair for showmanship, saw more possibilities than the usual firstspadeful-of-dirt ceremony preceding such a job. There were, he thought, dramatic possibilities for a real promotion job—with the power tools and equipment to be used in the project. Two days before official opening of



Power Tools Go On Parade

the project, Herrick Park, Moore untapped his idea. Newspapermen converged on the town, cameras clicked, and almost overnight practically everyone in Michigan knew about it.

Moore's idea: When power tools and equipment follow a band on parade down main street—that's news. And it was. Everything from power hand saws to large excavating and earth moving equipment was in the parade; in fact, all power tools and equipment used by five builders whu were to participate in construction of homes in the project went down a crowd-jammed main street, preceded by a high school band. Local citizens lined the streets; then a few days later. lined up to buy homes in the new subdivision.

For the power tools and equipment, it was just the beginning. Today, two years and over 60 homes later, Herrick Park is developing into the town's proudest addition. And the same tools and equipment are contributing as much to cost savings in erection of homes as they did to a sensational promotion job. Through cost savings made possible by their use, and through a generous citizen, R. W. Herrick who bought and offers lots in the subdivision free to qualified persons who build there, more than 60 families have bought homes for as low as \$7,000 and as high as \$25,000.

Homes completed in the 52-acre tract so far have been conventionally built, both to sell and on contract. Herrick, president of Tecumseh Products, had the tract subdivided into three lot sizes, 50×120 , 70×150 to 160, and 100 $\times 200$ to 300 feet. Depending on the size of the lots, homes were to be built in what he termed A, B, and C classes. Homes in the A class sell for about \$25,000; those in B for about \$10,000, and in C, about \$7,000. Any local builder was invited to build in the subdivision, and five building firms so far have participated. As might be expected, a pleasing variety in design is one of the results.

Power tools were used extensively by all of the participating builders, though most of them with one exception did not build over 10 homes per year.

How power tools save money is explained by Builders Kempf and Matheny, who have completed three A homes and one B home in the project. These builders employ an average of six men, and supply them with enough power tools so the amount of work they complete is more than twice the amount they could complete without them. Says Matheny, "It used to require five men to do the necessary frame work on a job with our firm. Now, one man with a power hand saw can do the same amount of work." He indicated that comparative cost savings are made with other power tools he uses, though, with one exception, he makes no special use of them. The exception is a power hand tase bolted to a table.

The lightweight saw table built by Matheny has an opening for the saw blade and provisions for bolting a saw to the underside. The saw is attached upside down. "It is easier to see pencil marks on the piece you are cutting, since teeth of the blade keep sawdust out of the way and you don't have to look over the end of the saw to see the mark," he explains.

Other power tools used by this building firm include a tilt-type cement mixer, three floor sanders, one edger, a table saw, joiner, band saw, mortiser, drill press, and three additional power hand saws.

One A class home just completed by Kempf and Matheny in Herrick Park offers a good example of the quality work done by these and other builders in the project. The home has a full basement with 7 feet, 31/2 inches clearance from the basement floor to the first floor joists, a Heatilator fireplace in the living room and in the basement, and all copper plumbing. Kempf and Matheny take pride in their carpentry, and this offered them a good opportunity to demonstrate their work. The power hand saw attached to the table, Matheny says, is especially handy for this type of work since the unit may be easily moved. from one room to another, or from one job to another

The basement of the house has a large game room with a bar at one end; a spare bedroom just off the game room, and ample space left over for a home work shop, furnace, water softener and water heater. Laundry



POWER hand saws play leading role in Herrick Park project

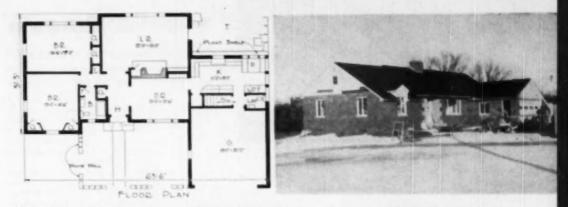
provisions are adjacent to the kitchen on the first floor. Almost all of the basement is carefully finished in knotty pine. Built-in shelves behind the bar are knotty pine, with McKinney ornamental iron hardware on the doors.

Builder to complete the most homes in Herrick Park is Clifford Riley, who has built about 40 homes to sell (32 in the low priced range), and plans to build 15 or 20 more this year. Power tools used by Riley include five hand power saws, two table saws, two concrete mixers, several hand sanders, and an electric threading machine for plumhing. Riley gives this example of how power tools save money for his firm:

"Four men usually constitute our carpentry crews, using power tools. Without power tools, it would require at least six men to do the same amount of work."



CONVENTIONALLY built homes offered by Builder Cithord Riley in Herrick Park sold for less than \$7,000, with full basements



HOME built on contract by Kempl and Matheny sold in Herrick Park for about \$23,000. Architect is Norris Freeman Premico



PARTIAL LIST OF POWER TOOLS USED IN HERRICK PARK: Allis-**Chalmers Manufacturing Co., bull**dasars; American Floor Surfacing Machine Co., sanders, spinners, adgers: Chain Belt Co., Rex concroto mixors; DeWalt, Inc., table sows: Ford Motor Co., trucks: Fred W. Wappet, Inc., portable hand sows: J. D. Wallace & Co., table saws, jainters; Mall Tool Co., partable hand saws; Skilsaw, Inc., partable hand saws, senders, drills; The Janger Machine Co., concrete mixers; Unit Crone and Shovel Co., shovel and drag line Riley employs no prefabrication methods, though he uses jigs on the job for framing. Enough material is usually cut at one time to frame four houses by using these jigs and power saws. Five completely different plans are used for the houses, which are conventionally built throughout. Riley reports that all homes built by his firm last year were sold before completion.

Other builders to complete homes in the project besides Riley, Kenpl and Matheny, are M. H. Thielan, Bradley Construction Co., and Fred Myers. Excavation was done by Charles O. Winters, who used a power shovel and drag line, two buildozers, hydraulic dump equipment, and several one, and one-half ton trucks. Materials for the homes were supplied by the R. S. Moore & Son Co., of Tecumsch.



WALTER T. ANICEA designed this home



H. H. THIELAN completed this home



AHOTHER outstending home is project

MAY 1950

79



A Home a

A SIMPLIFIED system of materials enables a Chicago building firm to average one costpleted home a day. The system is based on the premise that power tools can work at the peak of their productivity only when material is properly channeled to them.

The builders, H. Morton Robbins & Associates, say time-saving begins in their operations before lumber leaves the yards. Usually, one truck is loaded with enough material to rough frame one house, and humber is stacked on the truck according to a method commonly in use in many lumber yards supplying material for larger projects. The last piece of material to be used on the house is on top of the truckload, so that after the truck is unloaded at the house under construction, the first material to be used is on top of the stack, easily accessible to the tough framing crews. For instance, when lumber is stacked in front of the house, floor joists will be on top of the load; then subflooring. 2x4's, ceiling joists, roof rafters. and roof sheathing, in that order.

Whenever possible, this firm starts all homes that are to be built along one side of a block at once, about six or eight homes. A crew of from 15 to 20 men work in pairs, and one, two, or three two-man leams work on the house at one time, depending on what stage of construction the house is in. They use power hand saws and gasoline powered, portable generators.



WHETHER it's heavy, fastanoving equipment like this used on their project, or small-power hand tools—the Morton Robbins firm maintains that If you keep the tools busy, power tools more than pay for themselves

Day with Power Tools

Efficiency of power tools and equipment depends largely on how well you keep them husy, says this Chicago builder who co-ordinates his activities to eliminate waste time

Rough framing starts with two men who cut and erect floor joists, and erect and level beams.

The second two-man team levels the plates and marks off window and door openings. A third team of three men nails the plates to stude, completes assembly of exterior walls on the ground, and raises them into position.

The fourth team of two to four men install window frames and sheathing on the walls, and the frith team of two men installs ceiling joists and nail blocks for facia. Rafters are erected and sheathing is applied on gable ends by the sixth team of two men, while the seventh two-man team, in about three days, completes framing the partitions. When the last team leaves, the house is ready for lath and plaster. In the meantime, other workers not working as teams have laid the subflooring, helped raise exterior walls, applied sheathing and roof covering. and completed jobs necessary to get the house under roof. Electricians and plumbers have finished by the time the seventh two-man team completes its work.

Throughout the whole procedure, efficiency of the system depends on close timing and the organization of men and materials so that the power saws and generator are kept busy as much as possible. Since the houses are close together, little time is wasted by moving equipment from one job to the other, and the system is so worked out that one team seldom has to go



POWER hand saws are big time-sawers in the current Robbins project, where a system of materials handling and rough framing keeps them almost constantly in uso. Saw shows here is made by Skilaaw



STREET acease of current Robbias project flustrates firm's procedure of beginning work on one cumplate side of block at once



THREE portable generators (background) are used

HAND powered router does the work of several men

back to a job once it has completed an assigned task.

Power hand saws and generators are only a small part of the variety of power tools and equipment used on the 184-house project nearing completion by the Robbins firm. Besides employing a large battery of excavating and earth moving equipment (subcontracted), the firm used three concrete mixers, a plaster mixer. drills, groovers and other power tools, and Robbins is quick to point out their importance in the attainment of construction speed.

Besides the current 184-house project, H. Morton Robbins & Associates have completed 30 single family units and 26 row house apartments in Evanston, III.; 48 single family units in Edgebrook, III.; 10 apartments and 40 single family units in Park Ridge, III.--all in the past two years. Says Robbins, "Power tools are time and money savers, and without them we certainly could not have accomplished what we have in this amount of time."

Concerning individual tools, Robbins believes that hand power saws save well over 50 per cent on cutting ; that power portable generators save much time since they are easy to move



ONE of firm's largest mixers in action



FLOOR plan of typical Robbins home

H. MORTON ROBBINS homes sell in Chicays for \$11,200 and \$12,500 with 45a130foot lots. Elichens are equipped with steel cobinets. Bathrooms have colored Entures



AMERICAN BUILDER



HOMES along one side of block were started at the same time, and as illustration shows, each will be completed at the same tim

around, and that "they provide more power than we would be able to get from regular line power." Robbins, who has used "as many power tools as practicable" since he came into the home building husiness in 1938, had several years of experience with them hefore that. During the '20's he specialized in industrial and apartment work.

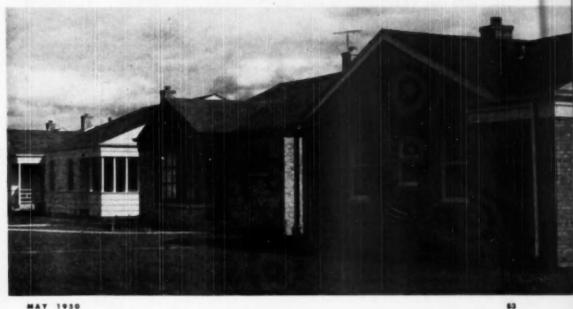
Homes completed in the current Robbins project sell for \$11,200 and \$12,500 on 45 by 130-foot lots, and offer good value for the money. Floors are oak except in kitchens, which have inlaid linoleum, and baths where Ceramic tile is laid. Ceramic tile is used to enclose tubs and showers in bathrooms, and plumbing fixtures are colored.

All windows and doors are weather-

stripped and screens are provided. Kitchens are equipped with steel cabinets. Heat for the homes is supplied by automatic gas-fired forced warm air furnaces.

Excavation equipment used on this project included a power shovel, a front-end loader, tractor and selfloading scraper, and a grader. Subcontractor R. W. Dunteman, owner of the equipment, says the power shovel can move about 500 cubic yards of dirt in one day; that the front-end loader can dig two average-sized residential basements per day or backfill four or five. High speed in handling dirt may be achieved with the selfloading scraper, he explains, since it automatically picks up dirt, transports it at high speed to any desired destination, then automatically ejects it.

POWER TOOLS AND EQUIPMENT MANUFACTURING 475 P. ADAMS CO., grader; ANCHOR MANUFAC-TURING CO., rtur miners; BAY CITY SHOVELS, INC., pewar shavel; CATEPPILLAR TRACTOR CO., front der and scraper; HOMELITE CORP., ggsoline-powered generators; SKILSAW, INC., power hand sows; STANLEY TOOLS DIV., THE STANLEY WORKS, groover, THE JAEGER MA-CHINE CO., concrete misers





AIR view of Overlook Acres. a development of homes selling in the range of \$10,900 to \$12,200



FELIX CASTE

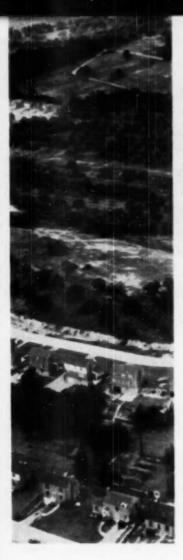
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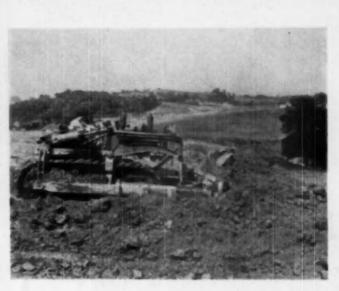
OBSTACLES SURMOUNTED WITH POWER TOOLS

FELIX CASTE, president of the Caste Development Co., of Pittsburgh. Pa., has been building in this area since 1922. His firm is responsible for the development of a number of large housing projects. Overlook Acres, the development featured in this article is currently in the process of completion.

Due to the hilly terrain that exists in and around the city of Pittsburgh. Caste is contronted with the task of moving huge quantities of earth in the process of building. Most of his projects are started from scrath. After acquiring a virgin area of ground his firm puts in all the underground and surface work such as the sewer, water lines, leveling, filling, grading, paving and curbs before any actual construction work is started on the houses.

The fact that Caste is able to estab-





lish economies and maintain values comparable with houses that were offered to the public twenty years ago, in spite of natural handicaps, is due in part to the extensive use of power tools and equipment. An adequate supply of equipment of this nature is owned by the Caste Co., and is carefully maintained and made available for all the men. The power tools include everything from hand saws to heavy earth-moving machinery including bulldozers, crawler shovels, dozershovels, bullgrader, graders and rollers. They find that through ownership of this type equipment there is a great saving in time by not having to wait around for rental equipment. In this manner Caste maintains control of all the various phases of his operations

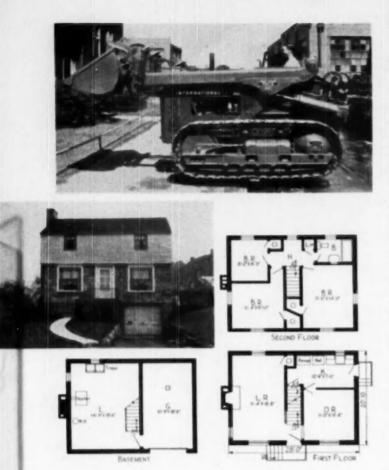
with a minimum loss of time.

In his building operations over the past twenty years Caste has held to a standard type, two-story house that is offered in the medium and low-cost price bracket. This type of house has net the needs of the community it was built to serve, with the result that the design has remained fairly static with improvements made to conform to present conditions. This permits the company to accurately compare the cost of homes built in 1949 with those built in 1929.

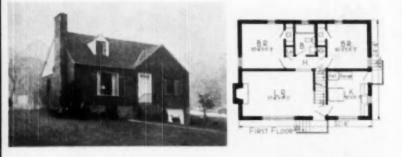
In 1929 a $22 \ge 24$ foot, five room, two-story house was offered for sale for \$7.500. The '29 house did not include insulation, copper piping, gasfired furnace or 180 pound asphalt roof shingles and only half the number of



THE buildness and crowler shovel are part of the heavy equipment owned by the Casts Co. to carry on their large scale operations. The shovel is used for display foundations. It moves ¹/₂ cubic yard of material with each loading of the bucket. The buildness is used for all types of lobs



PLANS and home shown above are typical of many of the houses built in Overlook Acres. The sloping ground of the development makes possible the use of portion of basement for garage. The garages occur at front or rear depending on which side of the house is located



THE story-and-a-half house, above, with half story left unfinished, is a variation from the typical two-story houses that characterises this dayslopment. All face here is a combination of brick and wood siding are used on esterior The dossrahovel (better known as a highlift) is irequestly used for excavating

electric outlets that were contained in the '49 edition. Downspouts were not connected to the sewer ; a wood floor was placed in the bathrooms, and Keenes' cement wainscot was marked off on the walls. The maximum width of a lot was 30 feet as compared to the minimum of 50 feet now required. Paved roads, curbs and gutters were not included in the price of the house. These were taken care of by the new purchaser at a later date. The prototype of the 29 house, including all the items mentioned together with complete landscaping, is now offered by the Caste organization for \$10,900.

Overlook Acres contain approximately 300 homes ranging in cost from \$10,900 to \$12,200. The majority of the houses are the six-room, two story type, with full basements, and garages. Others are one-and-one-half story bouses with four rooms on the first floor and with the half story left unfinished. Complete basement includes garage.

A number of exterior variations are used, including combinations of wood and brick, change of window fenestrations. The position of the garage in relation to the house changes in accordance with the ground profile. The development site, being extremely rolling, required a great deal of cut and fill for streets and buildings. Economy has dictated a pattern of approach from street to house.

The present Caste organization is built up almost entirely on mutual confidence which has engendered loyalty and good will among the employees over the course of years. Management and labor have never been in any serious disputes. All the men are considered a part of a permanent group, with equal consideration being given to each employe, whether laborer or superintendent. The policy has developed a spirit of cooperation within the organization that has paid out in dollars and cents through greater efficiency of operation. A continuing program of work, arranged to keep the men busy during all kinds of weather, is responsible for the sustained confidence of the workers.

All of the above adds up to just one thing i reduced costs. This enables Caste to offer to the public a better house for less money than his competitors. His sales organization is compased of one man. Advertising is unnecessary because this company's efforts are well known in the Pittshurgh area and the name Caste is synonymous with good workmanship and a fair price.

AMERICAN BUILDER

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UNIFORMITY of appearance and plan is cheracteristic of the locuss in the Gimore development shows at laft. Work under construction below

Ratio of Value to Cost



A COMPARISON of costs on the Stevens plan, one of a series of houses completed in 1941 by the Catranel Construction Co., Pittsburgh, Pa., with the Gilmore plan houses, part of a recent development by the same company, brings to light some interesting facts.

The increase in home construction costs has in most instances been attributed to labor and material. In the following schedule Roland Catarinella, son of the founder of the business, sets forth a brief comparison of the two plans.

STEVENS PLAN-1941

House size 21 feet 6 inches by 26 feet 6 inches

House description ..., Brick veneer, six rooms with bath, integral garage, 1.140 square feet

Kitchen and bath Linoleum

Plumbing Copper throughout Furnace Coal fired Coal bin under stoop, non-wood hurning fireplace with mantel.

Sales price \$6,705.00

GILMORE PLAN-PRESENT

Lot size 50 feet by 190 inches Street Improvement Asphalt top street with rolled concrete 50 feet dedicated curb

House Description Brick veneer, six rooms and bath, integral garage, 1215 square feet

leet more floor area. In 1941 the FHA and township required a 5,000 foot minimum lot area. At present 7,500 square feet are required. In '41 FHA, borough and county, allowed street grades up to 20 per cent and required 40 feet for dedicated streets. At present the same government institutions now have reduced grades to 15 per cent and have increased street dedications to 50 feet. In addition the borough in '41 approved streets that were paved with asphalt top to a width of 20 feet with no curb, while at present the Township requires streets paved to a width of 25 feet with rolled concrete curbs and asphalt top roads. Then there is the comparison of a coal furnace as against a gas-fired with thermostatic control. The improvements set forth add an estimated \$700 to the present house. Deducting these improvements leaves a basic cost of \$6,505 for the '41 house. These figures indicate that the present house as compared to the '41 house is up 49 per cent.



THREE houses spring from a basic plan which is similar except for position of the stair. One stair is placed at centre, others at sear



BIG Torru Cohen does original grading at sito

Specialized work crews making wide use of mechanical equipment contribute to peak efficiency of large California building firm

THE OPERATIONS of one of the biggest builders and developers in the Los Angeles area are marked by the use wherever possible of power tools and equipment—from a heavyweight earth-moving machine for the original grading to power sanders for finishing interior trim.

The construction firm, Valco Inc., of North Hollywood, Calit., is headed by Earl L. White who has been building in the Sati Fernando Valley since 1915. Since starting in the area by subdividing his own ranch, White has developed Magnolia Park with more than 1,000 homes, has built more than 800 in North Hollywood Village and recently completed a 608 project with 501 apartments. His latest development, Woodman Square, will contain 500 two- and three-bedroom homes.

The building end of the firm's business is handled by White's two sons, with "Ferk" White devoting his time to commercial work and Loy L. White in charge of residential construction. Their general superintendent is Leo Bennett. In a sustained program to increase efficiency they have built an organization which combines high specialization by work crews with their wile use of mechanized equipment.

The Woodman Square project is being directed by Loy White and W. J. Lyberger, field superintendent. The original grading was done by J. A. Thompson and Sons with a big "Terra Cobra" made by the Wooldridge Manufacturing Co. of Sunnyvale, Calif. The machine holds 14 cubic yards of dirt and travels to the work site on its own wheels. Where the going is heavy it is usually helped by a "pushcat," in this case an Allis-Chalmers buildozer. The big machine does the rough work up to a point where a fine grader can take over.

Trenches are dug with a tractor-pulled machine made by a local contractor. Operated by one man, it digs trenches 18 inches deep by 12 inches wide for 14 houses in one day.

Foundations and garage slabs are made with readymixed concrete. A Whiteman cement floor finisher, with three trowels attached, completes finish of the garage slab in from 20 to 25 minutes. First used about two hours after the cement is poured, the machine is used again after the cement has reached a firmer set. A hand trowelling provides the finishing touch.

Lumber for each house is cut to size at the lumber yard, and assembled and strapped in order of use at site, with

From Excavation to



STANLEY drill is used for boring of holes in mudallis



WHEELED sout for nailing makes it easy to move around





COMET table new is used for cutting stude and headers



SEILSAW is available for framing operations on project

SPEEDMATIC new facilitates the job of rafter-cutting



PIPE-THREADING is done on alls with Beaver Threader

mudsills on top and roof sheathing on bottom. Studs and headers are cut by a Comet table saw, mounted on wheels, which is taken from one pile to another. After the material is cut it is placed as close as possible to where carpenters are working.

Rafters are cut and notched with a Speedmatic hand saw. The cutter places several rafters on saw horses, makes his plumb cuts, and then cuts the notches separately, these having previously been marked with a templet.

The various carpentry operations are performed by specialized crews. These crews do the same work every day and require little supervision, each being thoroughly trained to time their individual tasks to keep the over-all program running smoothly.

All framing is done with the aid of power saws; the only place where an ordinary hand saw is used is in cutting the rafters just before applying the facia boards.

Several brands of power saws are owned by the company, Field Superintendent Lyberger said, including Skilsaws, Comets, Wappats and Speedmatics. They are given a thorough inspection before being stored overnight in a garage and, if out-of-order in the slightest degree, repaired immediately. To promote better maintenance, craftsmen

Interior Trim with Power Tools



PIPE is cut on job with a Pacific Service pipe cutter



R. L. CARTER jointer used for smoothing roller tails



PORTER-CABLE sander takes care of finish work on door

DUOFAST stupler attaches insulation to window frames

SEANDED PRODUCTS USED: Transite flue pipe, JOHNS-MANVILLE; service panel, GENERAL SWITCH CORF.; Penverten window gless, PITTSBURGH PLATE GLASS CO.; asphalt tile, ARMSTRONG CORK CO.; asphalt chingles and Reckleth pleater board, UNITED STATES OTPSUM CO.; American Standard plumbing Extens, AMERICAN RADIA-TOS and STANDARD SANITARY CORF.; Coronade bethroam eccessories, MALL-MACK CO.; paints, OLD COLORY PAINT and CHEMICAL CO.; building paper, SISALKRAFF CO.

are assigned particular tools which they use continuously. Lyberger figures that a power saw pays for itself within

a year. As for safety, he says that this is no problem if the men are properly trained in use of the tools.

Plumbing trees are also prefabricated in a shop set up on the site. The pipe comes in regular 21-foot lengths, is cut to size by a Pacific Saw Service pipe cutter, threaded with a Beaver threader and assembled on jigs. Wardrobe closets are also prefabricated.

Five floor plans and 26 elevations are used in the Wood-(Continued on page 180)



TYPICAL floor plan used in Woodmen Square develops



ARTIST'S drowing of one of Woodman Square houses

AIR VIEW of firm's 501-operiment project



WHITEMAN coment floor finisher used on garage sich

MAY 1950



INTERESTING effects are obtained on both exterior and plan by split level arrangement that conforms to sloping site

A Four-level Modern Provincial House

AMERICAN BUILDER

Blueprint House

Number 41

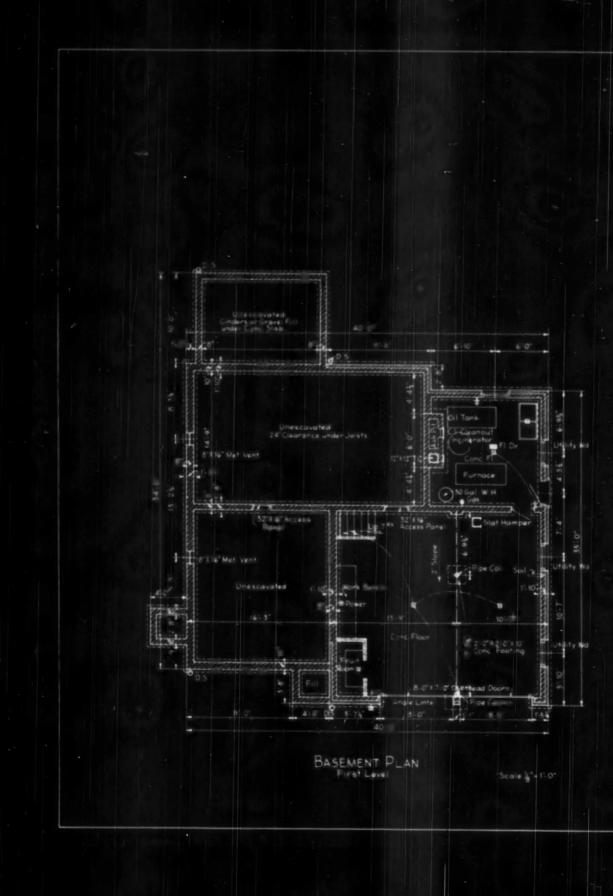
M. I. Thornton, Architect

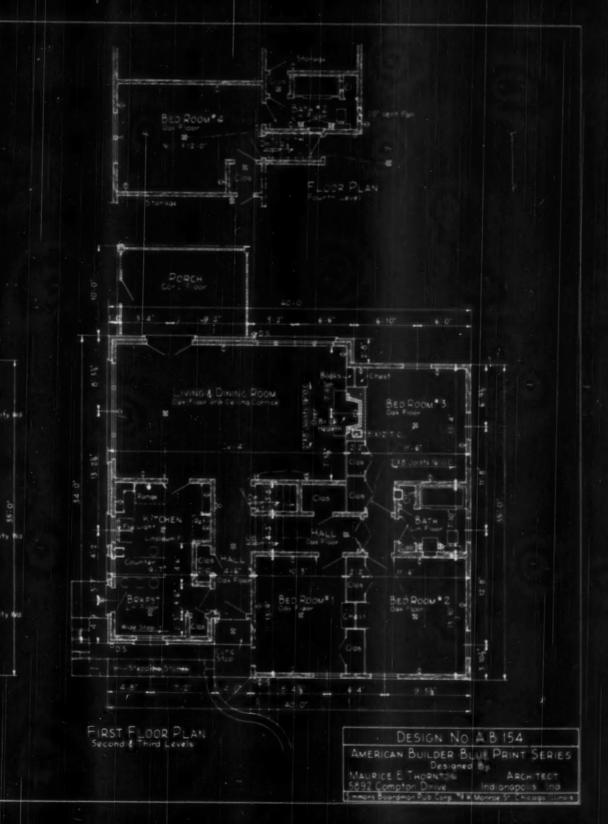
THIS house, designed by Maurice E. Thornton, Indianapolis, Ind., architect, for his own use, represents the latest in split-level plan arrangements in his community. What appears to the eye to be a normal one half story house is in reality a house with four distinct levels.

The areas contained in each of the levels are as follows: First level: garage and utility room. Second level: hall, kitchen, breakfast room, living-dining room, and screened porch. Third level: three bedrooms and bath. Fourth level: one bedroom, bath and storage areas.

Thornton designed his house to conform with two important facts recently discovered in research work among home owners by the University of Illinois' Small Homes Council. That is that women do not like to sleep in hedrooms located on the ground floor. In conflict with this feeling is the fact, also found, that neither men nor women like to climb stairs. Thornton's solution was to provide a half flight to each of the levels, thus reducing the stair climbing and eliminating ground floor sleeping.

Luxury accommodations are provided in every room of this house. The 15 x 25 foot combination living-dining room with two picture windows, fireplace, bookcases and adjoining screened porch overlooking the rear garden is a model (Continued on Jaye 95)





10: 7





PARTIAL view of large combination Rving-diming noom looking toward Rreplane and built-in boolscases. Light trough at colling over fireplace hecomes an extension of cap member of booksesen. Hi-hat spetights are provided in colling in front of booksesses

VIEW toward exterior wall of kitchen with Formica counter top and bull-in sink. Larg-Susan revolving abelives in corner cabinot with compartment directly under to house Minmenter. Cooking tools and condiment shelves planed over range with all equipment concealed. Tube lighting concealed under appor wall cabinots. Strip lighting is provided over counter



(Continued from page 90)

of convenience. The kitchen is provided with a separate breakfast area and with ample space for all equipment. The four bedrooms are of generous size with sufficient closet space for each. Walls of both bathrooms are faced with Carrara glass in distinctive colors to an average height of five feet. Illumination consists of flush, spot, concealed and direct light fixtures with wall plugs and telephone outlets throughout. Strips of electrical outlets are provided along the kitchen walls for plug-ins for equipment. A large ventilating fan, located on the ceiling of the fourth level, draws air up through the entire house. Storage wall cabinets separate bedrooms one and two, and one wall of bedroom three. All utilities for beating and laundering are located in a large utility room on the first level. This includes a water heater, incinerator, and gas-fired forced air furnace.

The exterior of the house is finished in variegated shades of tan pressed brick with vertical battened siding above, in natural finish. Window frames are double hung aluminum with Thermopane glass in the picture windows. Walls and ceilings are completely insulated with four inches of Rockwool.

This house was built by Paul R. Leach of the Development and Construction Corporation for \$25,000.



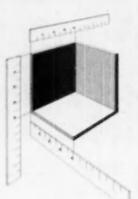


VIEW looking up the second flight of stairs to third level. Ornomental swinging doors in hall provide privacy for bedrooms and bath

BELOW view al kitches looking toward breaklast room. Divider cabinets above counter open both ways. Tube lighting recounced into botion of upper cabinet. Cabinets below counter contain sliding towel ranks. high bread drawer, etc. All shelves in base sublists slidie out. Flug-in strip lighting is under cabinets



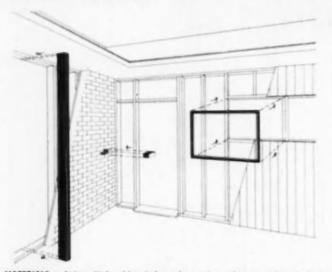
Facts about Modular Co-ordination



A MODULE is a unit of measurement. It may be any number of inches, or feet, and may be applied to width, depth or height **O** NE of the fundamental technical approaches to the accomplishment of cost reduction in building is through modular co-ordination, the standardization of materials on the hasis of measurement.

If all building materials were made to standard sizes which are multiples of a certain number of inches, and if -all architects used these standards in developing their plans, then there would be no waste of material at all, theoretically at any rate.

The idea of modular co-ordination as a method of cutting construction waste was first launched by Frederick T. Heath in 1925. It gained momentum with the development of the 4inch modular concept by Albert F. Bemis in his third volume of "Rational Design," published in 1936,



MATERIALS made in multiples of four inches reduce cutting and waste, and can be fitted together in a simple and orderly manner where building was planned for their uso and got into full swing with the organization of Project A-62 of the American Standards Association in 1939.

Study committees representing all branches of the building industry, including architects, builders, manufacturers, agreed after a thorough analysis that the 4-inch module was the most convenient basis for standardination of building products. This size was selected for the following reasons:

 It is large enough for manufacturers to reduce the number of stock sizes and still satisfy consumer demand.

(2) It is small enough for ample freedom in architectural design and for flexibility in equipment layout.

(3) It coincides with the dimensions of a great many building materials already standardized and is applicable to present construction practices.

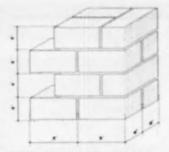
(4) It is a unit measurement with which architects, builders, masons and carpenters are already familiar.

(5) It approximates 10 centimeters (3.9 inches), the basis proposed by metric system countries working on the same problem.

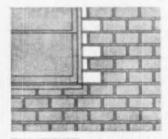
(6) Standardization of houses is prevented, since the 4-inch unit is small enough to permit entire freedom as far as design is concerned.

A number of building material manufacturers have already switched to making their products in the new size. Others, going into production of new materials, have adopted the 4inch modular basis from the start, with the result that the idea is gradually becoming a movement.

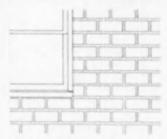
Data and drawings through courtesy of Housing, and Home Finance Agency, Washington, D.C.



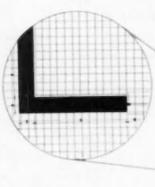
MOST building materials require a certain joint thickness. Manufacturors make their products smaller by amount of joint required for assembly, thus keeping dimensions within stipulated mutiples of 4 inches

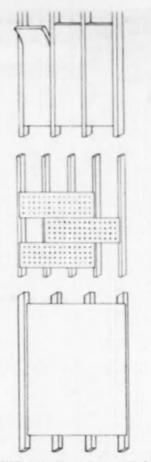


UNCO-ORDINATED window and musenry necessitute extru cost of cutting bricks



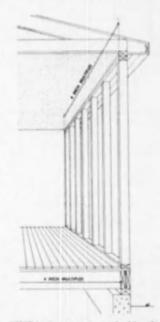
MODULAR window, moscory need no cutting





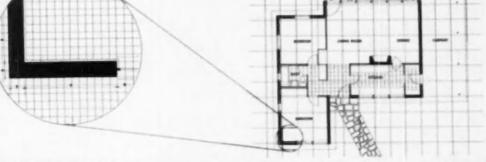
SOME construction practices are already on 4-inch modular basis. Top: bat and blanket insulation between studs spaced 16 Inches O.C. Center: 16x8-feet planterbourds fit 18- or 24-inch stud spacing, Bolow: 4x8 wallboard sheets fit 16x24-inch stud specing

Lat your suggestion pay you five dollars (\$5.00) in cash. This sum is paid by American Builder ine each shart cut or job pointer that is an capied for publication. Sand all material to Architectural Editor. American Builder, 72 W. Monzos St., Chicago 3. EL.



SINCE lumber comes in standard lengths. a well-co-ordisated house design can take advantage of these standard sizes to use them with a minimum amount of cutting

nnentin



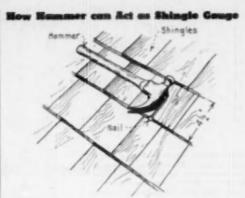
ARCHITECT'S design is on bosis of 4-inch module. Grid dimonsions "X" (Jolt) are multiples of 4 inches, in example (right), 48 inches



THE job of framing a 134-inch-thick sliding door into a 534-inch-thick interior partition will get a mechanic into trouble if he is not cautious. The studs at the recess for the door will of necessity be of 34-inch-thick stock. This means that the danger of these members warping into the door is present. If space blocks are cut between these studs before the partition is lathed and plastered, with a light wire secured to each of the spacer blocks for easy later removal, this danger will be overcome. Care should be taken that the spacer blocks are left in place until the plaster is thoroughly set and dry.—Submitted by Raymond R. Neal, Phoenix, Ariz.

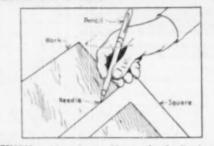
How to Remove Interior Trim

F INSIDE trim is to be re-used on remodeling jobs, do not use a wrecking bar. Remove trim by using a $\frac{3}{3}$ ₂ inch pin punch. Use pin punch like a nail set, and drive finishing nails clear through trim. This does not split trim. --Submitted by W. A. Woodard, Volga, So. Dak.



D RIVE a 16 penny nail into the head of hammer for a short distance and then bend the balance of the nail so it lays parallel with the head of hammer. In this manuer an emergency shingle gauge can be made in a hurry. The distance from the head of the nail to the head of the hammer should equal the distance that the shingles are laid to the weather.—L. B. Ferguson, Haskell, Texas.





WHEN marking trim or cabinet work a fine line is somelead in an automatic pencil with a darning needle. When not in use the point can be retracted in the same manner as lead.—Submitted by Albert Keebler, Ryan, Iowa.

HOW TO DO IT . HOW TO DO IT

No. G - 7 ... Store Interiors

N PREVIOUS issues the detail plate has covered the construction and design of store fronts of both new and remodeled structures. In this month's detail plate (opposite page), the interest is centered on the design and construction of a combination hag and hosiery department in the interior of a modern shoe store. This department is an integral part of the store fixture arrangement, and yet it is an individual and distinctive sales unit placed toward the front of the store.

Bags which are a good tie-in item with shoes are shown prominently displayed on plate glass shelves in the 5 foot 6 inch high open case in back of counter. The lighting for the bags is provided by vertical fluorescent light strips placed in front of the vertical division bars of case.

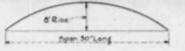
The wrapping counter sides and front are covered with Marbelia wallpaper in shades of black, aqua and chartreuse. The upper portion of the bag showcase adjoining is made of mahogany finished natural. The lower portion of this case is constructed of oak sides with oak trim around the Weldtex panel front. The Weldtex panel in this case is lacquered a glossy black.

The bag wallcase is constructed with an oak frame with lacquered interior and Marbelia wallpaper on ends and back. The wallpaper colors are turquoise and gold. The supports for this case are also of an oak frame with inserts lacquered black. The connecting flower box between the back of case and the wall is constructed of oak with hinged panel on face.

The walls of the store are painted an aqua shade with the ceiling in chartruese. The dropped portion of the ceiling is a greyish orchid. The floor covering is a sculptured carpet in a light greyish-green color.





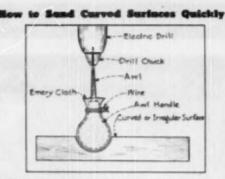


OW to determine the radius of an arch when the span and rise are given.

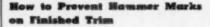
- Multiply one half of the span of arch by itself--15 inches by 15 inches equal 225 inches.
- Divide the above sum by the given rise, 225 inches divided by 8 inches equal 2816 inches.
- To the sum of No. 2 add the given rise, 28% inches plus 8 inches equal 36% inches.
- Divide the sum of No. 3 by two, 3636 inches divided by two equal 1833, a inches, which is the radius required to strike this arch.—Submitted by James Hill, Guelph, Ont., Can.

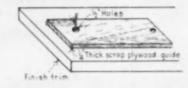


N CAULKING around portions of the exterior of a house there are places that are difficult to reach with the point of the gun. In such cases an extension may be made from a section of small rubber hose which is of suitable size to slip over the metal point of gun. The point of the rubber extension may be cut off at the same angle as the metal point of gun.—Submitted by Arthur N. Nelson, Karsas City, Mo.



THE QUICKEST way to sand curved or irregular wood surfaces is with an electric drill and a discarded awl. Wrap a 6-inch-square piece of emery cloth tightly around the handle of awl and hold it in place by wrapping wire around handle. An inch or two of the awl point is cut off so it can be held more securely in the drill chuck. In use start the drill and tilt from side to side while applying pressure at the same time. The emery cloth can be quickly replaced.—Submitted by Herhert E. Fey, New Brainfels, Texas.





TO PREVENT damage to finished trim from hammer marks when driving finishing nai's into casirgs take a 34-inch-thick scrap piece of plywood 1½ inches wide by 5 inches long to act as a guide. Bore a 34-inch diameter hole 34 inches from each end so plywood can be placed over nail while driving.—Submitted by Albert Keeh'er, Ryan, Iowa.

HOW TO DO IT . HOW TO DO IT

No. D - 66 ... Details of Open Carport

WHERE climate conditions permit, an open carport offers an economical solution to the problem of car protection. It also can be classified as a multiple use area during the day when the carport is available for outdoor recreation for both children and adults.

A study of the detail plate on opposite page will indicate that a feature of this type can be made integral with and a complement to the design of the house. A hattery of storage units which extend from floor to sill of window on adjoining wall of house forms one wall that protects the carport area during inclement weather. Cast iron columns extend through storage units to floor to sup ort ceiling joists. The upposite side is entirely open, joists being supported by a double wood beam which in turn is supported by a hattery of four cast iron columns embellished with brackets supporting flower pots. A pleasing arrangement is the extension of carport roof to provide a sheltered walk to front entrance door. The sofit of this extension is finished with plywood while the ceiling joists of carport are left exposed and painted a deep contrasting color.

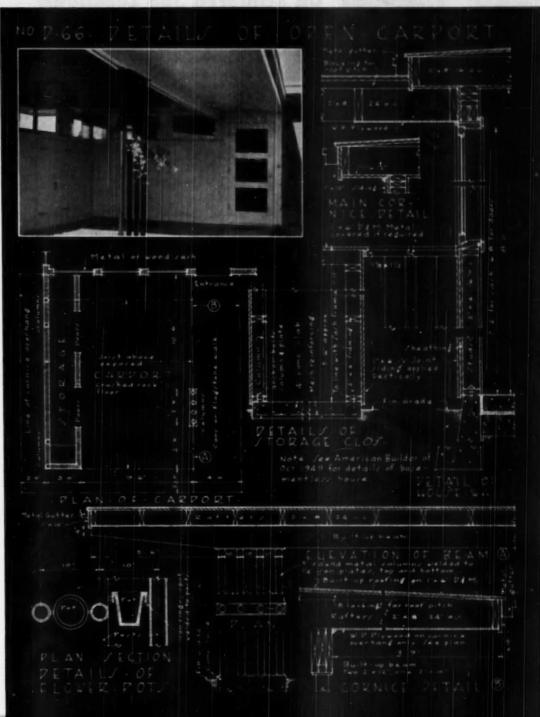
A concrete base and floor are provided for the storage units and floor to front entrance. Balance of the floor of carport is gravel. The finished surface material of storage units and an adjuining wall of house are of 4-inch M&B vertical boards. This and other methods of carport arrangements have been successfully used by Edward B. Hawkins, designer and builder of a development of 35 houses in Denver, Colo.

AMERICAN BUILDER

New-To-Do-It Painters Continued on Page 130

AMERICAN BUILDER'S BETTER DETAIL PLATE

Detailed by R. J. Alexander for American Builder





TWO-BEDROOM homes, conventionally built by Maxon company, sell for \$11,000 in Barrington. Ill.

WHETHER you build several homes in one block, or one house in every four-power tools can save money.

This is proved in the experience of the Maxon Construction Co., Barrington, Ill. Of 41 homes completed last year (25 for sale, 15 on contract), most were on widely separated lots, which meant transporting of tools and equipment from one job to the other. This firm emphasizes quality comstruction, and conventional building methods throughout. But the use of power hand saws, a table saw, an impact hammer and other power tools and equipment is profitable-though no prefabrication methods are employed, and little work is done in a shop. The tools, the firm says, make profits through their own productivity, and because they are handled properly.

A power hand saw, for instance, can average a savings of from four to eight man hours per day. A comparative savings is made through the use of other power tools.

How power tools save time and make money, says D. C. Maxon, head of the firm, depends largely on the men who use them, and ultimately on the organization of the building firm itself. Maxon employs more foremen in the field than usual, usually one in charge of each phase of the operation as well as one general foreman who goes around on the job. He carefully screens employees before they are hired, and believes in delegating anthority. Through this policy he has steadily built up a crew of workmen who take pride in their work and the tools they work with. Any foreman on the job is capable of handling all the construction details of the house he is assigned to. Five carpenters usually work together as a crew, and one of the five uses a power hand saw to do all the cutting and layout work necessary for the other four. On smaller jobs, two men work together with one handling a power hand saw.

Storage of tools is important to Maxon. An office, recently completed, has provisions in the rear for orderly storage. Bins, plainly marked, are built along one complete side of a large room used as a shop. The office is one of the most attractive in the immediate area.

In homes built to sell, Maxon uses about 15 different floor plans and about 45 different elevations. The designs are re-used, but always in different neighborhoods to avoid monotony of design. Working with D. C. Maxon is his brother, Norman, an architect, who also estimates all jobs. The general superintendent is Andrew Bjornherg, and field co-ordinator is George Kinimonth.



TABLE new with shoping equipment

	POWER TOOLS USED
54	ilsow, Inc., power hand sows
	ckwell Menufacturing Co., Delte usu
54	disawe, Inc., della
54	ilague, Inc., sanders
-	o Syntron Co., Impector hammer



BESIDES having attractive front, the roor of this office has shop with neatily arranged storage hins for power tools

DURING 1948, one power showel was used principally for trenching and the second was used almost esclusively for basement escavating on the Timely project of 500 houses

HEAVY crawler-type tractor pulling a

ONE of the builder-owned and operated power shovels storm the first basement

carrier moves on tract to start work



Is the advice of a builder whose accurate cost and progress records over a period of months show faster job operations

A 50 per cent saving in excavating, dirt moving and project costs because he owns and o, erates his own power shovels and bulklozers instead of subcontracting the work is claimed by Stephen Dudiak, president of Timely Homes, Inc., of Clifton, N. J. This large and well-known community development firm erected and sold 500 houses each year in 1948 and 1949. Plans call for at least 500 more this year. Price range has always been under \$9,000 until this year when the range is being boosted to \$10,500 with a few at \$12,500.

Light power tools and equipment have always been popular with the Timely firm because of the attributes of s eed and economy which they brought to each job. It was only four years ago when the first move to acquire a layout of heavy equipment was made. Since then two power shove's, two buildozers, ten electric power generators and three mortar mixers have been added to the array of power carpentry and building tools. This year Dudiak is planning the purchase of three pavement rollers, another buildozer, two motor graders, a black top paver, several heavy trucks, a low-bed trailer, a cement finishing machine and a water pump.

Dudiak manages his power shovels so that he is able to liquidate the cost in 12 to 18 months. To do this the machines must be busy fractically all of the time. In the last year the two shovels operated by Timely were on the job consistently with one digging hasements and the other digging trenches, curbs, and similar work. One $\frac{1}{2}$ -vard shovel was used to dig an average of four 24 x 30-foot basements every day. Some weeks it was



WITH excurating and utility installation work under way, trucks houl dirt away



PNEUMATIC hommors are used to break up pavement or rock formations



IN this picture of the Timely Homes Maple Valley project, a power shore), buildater, building materials track and tool track can be seen in use at same time

necessary for the shovels to work Saturdays and Sundays to keep ahead of foundation crews. Buildoners likewise are kept going at maximum most of the time. One buildozer was worked more than 4,000 hours in 1940 with a good deal of Sunday and overtime work included.

One of the biggest points of saving with ownership and operation of dirt moving equipment under direct control of the builder is in co-ordination of work, thus saving many hours by avoiding delays common when such work is sublet. Dudiak is very emphatic in his conviction that much more efficiency can be achieved on any operation by the builder having complete control of excavation and grading work. All crews can be kept going at full speed, especially the foundation and framing crews.

In the case of Timely Homes, the firm does work on a contract basis for the public utilities where it is necessary on the Timely project. Excavations for the installation of water mains, sewers, gas lines, underground power lines and other work of that type are handled much more efficiently and in much better co-ordination with the over-all job on the development when the builder can handle dirt moving and excavations for the utilities. Dudiak can afford to do this type of work for the utilities at closely figured prices because of the savings he can achieve in expediting his whole project.

The size of the Timely operation makes the use of the heavy dirt-moving equipment a profitable undertaking. Questioned as to what he considered the minimum volume a builder should have to operate dirt-moving equipment—a bulldozer, for example —Dudiak expressed the belief that any home builder who erects 100 or more average houses a year should have at least one bulldozer of his own on the iob.

He feels that electrical generators are much more valuable as time and

money savers than most builders realize. Any builder erecting 50 or more houses a year should have at least one generator, according to Dudiak, A generator was one of the first pieces of heavier power equipment which the Dudiak firm purchased four years ago. Experience since that time has convinced Timely that they are essential because wherever they work now they use electrically-powered tools and so must have power. In most instances when they first arrive on the job, anxious to get started, there is no power line to tap. That is when a generator is wheeled in and work starts under electrical power. If this cannot be done, all the power tools cannot he used to maximum capacity. The firm now operates ten electrical power generators.

This spring Dudiak established his own ceramic tile application firm and equipped the crews with power tools for cuting and shaping the tile. This setup was inaugurated so that he could have complete control of the tile setters and have them on his jobs when they are needed.

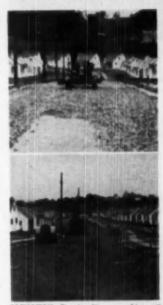
A woodworking shop where framing is precut and some assembly work done is maintained on the site. Except for the extensive precutting of house parts, all the work is conventional onsite construction. About 200 men are employed with two superintendents responsible for production on schedule.

The houses are frame with full basements in two and three-bedroom models. The model which was built in volume last year sold for \$8,990 on a 50 x 100-foot lot, without a garage. Heat is supplied by a forced warm air, oil-fired unit.

This year's two-bedroom model is larger and designed more along ranch-type lines. The price is \$10,500



POWER shovel operator and helper pose for photo beside the 338th excernition.



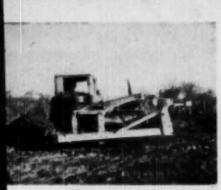
ALTHOUGH Timely Nomes sublet all pavement work up until 1955, equipment shown here working in the precisct last fail was on the list for purchase by this builder as It would be an hand for use in completing 500 or more homes in 1950

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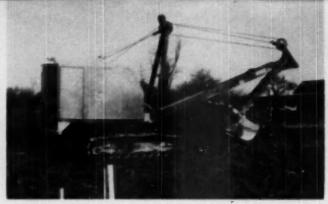
L'ELLELLE



OHE of the two buildenees owned by mely Homes at work is mud early this spring. One buildesse, on which time is kept, worked over 4.000 hours in 1949



STEPHEN DUDIAE, president of Timely Homes, considers these generators some of the most useful power units he has an the job. At present Timely operates 10 generators, varying in capacity from 2.000 to 10.000 watts. They are brought on each job to permit use of electricallypowered tools as soon as possible



TIMELY operates two units like this. One of them is hispard and the other hispard

on lots varying from 60 x 110 to 75 x 110 feet. The three bedroom model is priced at \$12,500 on the same lots, and includes a garage. Heat for these units is forced warm air, oil-fired. A gas kitchen range is also included in the sale price of this year's models. Floors are oak throughout except in the kitchen where linoleum is used and in the bathroom where floors and walls are tiled.

Windows are metal casements. In the first models erected this year the large picture window in the living

BRANDED PRODUCTS USED IN TIMELY HOMES on Rudiator & Standard Sanitary Corp. thing Ratures

ggs Monufacturing Co. plumbing fish and aiding shingles

ches all-fload forcad warm air furn

Texace asphalt shingles Thatcher all-fixed forced warm air form

Gilmon Brathers Co. Colladita in Lightaliar Co., lighting flatures or of Kahler plumbing fixt Booding Hordware Corp. hards Res outsmally hat water heat

Victor kitchen ventilating fone

Youngstown kitches cobi

Ro-Way garago duore Simples windows

plu

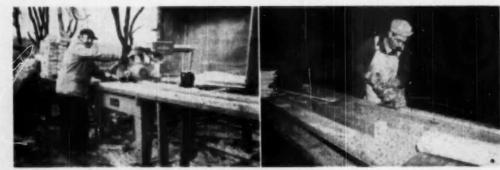
Ced

room was 6 feet high and 9 feet long. made up of nine 24 x 36 inch units. The floor-to-ceiling window in the front of the house drew so much criticism from prospective purchasers that after several months the three lower window units were eliminated to make the over-all size about 4 feet high by 9 feet long.

Interior walls are plastered over gypsum lath. Trim is colonial and doors are the slab type. All units are fully insulated throughout.

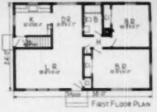


EXPERIENCE on this job has proved that one man operating one of these powered mortar mixors will do work equal to that of three men mixing by hand on the job



THREE beach saws and 20 power hand saws are operated by this firm. Although the houses are conventional frame construction, most of the cutting is done in an on-alto woodworking shop from where procut units are houled to foundations for assembly





*

THIS is the popular \$8,990 model which was built almost esclusively last year by Timoly Hames. These bouses, designed by Stanley A. Look. Dumont. M.J., had tan dilisered front elsvertices, which will color changes, provided plenty of variation





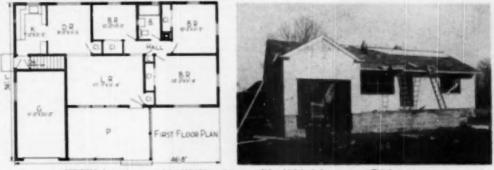
RENDERING and floor plan of the new \$10.500 model which will constitute the bulk of the 1950 effort for Timely Homes. There are five different elevations and roal arrangements to give variety in appearance. Rudolph L. Novak, is architect



STEPHEN DUDIAK. president of Timely Homes. hus built houses for 30 years

Heavy Equipment and Power Teels Owned by Timely Hemes
BHDVBLS 9 Link Bult Speeder, Nyrd. 9 Link Bult Speeder, Vyrgd.
BULLDQ2885 1 Ailis Chalmons 1 Caterpillar TBUCES
3 Dedge 1.mm 3 Dedge 15.4mm 1 Studebaber Back 11/jtun
1 Brockway II tas GENERATORS 2 Hemelite, 12,000 to 2,900 watts
7 Onan. 3.020 to 10,000 watts 1 Army surgers MOSTAR MIX025 2 Jacques, 1 bag martis
1 Karla Mis SAWS AND WOODWORKING EQUIPMENT 20 Parter Cable Speedmatty preserved hand
cows 3 Bilinew bonth sows 1 Dolta bandoaw 1 Dolta planing mathing
r seen parcel merces





PUTTING the root on one of the \$12,500 ranch-type models which includes a garage. This house was also designed by Novak. Timely Homes at present plans the construction of only a few of these in 1850



VIEW of Huntley Estates toreain. Eastchaster. N.Y., showing adverse soil and rock conditions which presented challenge to builder is attempt to keep cost down



SHOWING result of underground water conditions flooding crawlagare excavations when forced to aborderment of alch construction



NOTE sizes pitch of roof necessary to conform to local code demanding minimum 22 feet from top of first floor to ridge



Builders Beat Terrain and

THE concrete slab Boor system used for the first houses shown above had to be

abandoned in layer of regular foundations with crawl spaces so that work could

TO successfully bring the economies of volume medium-priced home construction into a market which has been traditionally high priced and necessarily keyed to high income buyers is an achievement of no small proportions being demonstrated in the Huntley Estates project in Eastchester, N.Y. In the face of high land development costs along with rigid code and zoning regulations, Edward J. Tobin and Mac Welson are currently engaged in building a community of about 275 homes in the \$12,500 to \$16,250 class on the former Hickory Country Club golf course in Westchester County.

One of the biggest factors in the high cost of home building in the Westchester area is the rough land. Top soil is heavy clay underlaid with ledges of rock running from a few inches to many feet in thickness. In addition to this, underground water near the surface is always a hazard to building. Part of the plan of Tobin and Welson is to eliminate all unnecessary costs and to hold others to the minimum without sacrificing quality. In conformity with that policy they decided to erect only basementless houses, thus saving the cost of expensive excavations.

When work was started at Huntley Estates late last fall, the houses were set on concrete slabs with circulating hot water to provide a combination of perimeter radiant and recessed convector heat. The copper piping to convectors is laid in each slab around the perimeter to heat the outside edges of the floor. In these houses hardwood flooring is laid on screeds set in mastic on the concrete floors. The slabs are built up with six inches of gravel, a one-inch layer of concrete, two layers of felt, mopped with tar, rigid insulation around the perimeter underneath for two feet and vertically against the foundation. The copper heating pipes are laid above this and then the finish four-inch reinforced slab is poured.

Because of the impracticability of laying concrete slabs on wet frozen ground, the system was abandoned during the winter months. Instead, footings for a regular foundation, without basement but with a 30 to 30inch crawl space were adopted so work could proceed without serious interruptions. Conventional wood floor juists, with subflooring and a finish floor of hardwood or asphalt tile over plywood are used. The hot water heating pipes from the furnace



proceed during winter months when alghe could not be poured over trasen ground

To bring the economy of volume medum-priced home construction to a market geared to high costs and prices involved solving many knotty problems in preparing difficult torrain to meet rigid code restrictions



ROUGH-graded street indicates rock conditions that had to be coped with in all grading



to the convectors are run around the perimeter of the house under the floor. This plan still retains some of the features of the perimeter radiant syntem which was used in the slabs.

The ground under the crawl spaces is being sealed with two inches of black top. Directly under the wood floor there are 4 inches of mineral wool insulation with a processed paper moisture barrier under that.

Despite the decision to build only basementless houses, the excavation and land preparation costs in this tract are running excessively high. When there were about 75 houses finished or under construction, more than \$200,000 had been spent on excavating, rock removal and earth hauling on the entire project. One stretch of street about 150 feet long on a side hill was so heavily loaded with solid rock that before it had all been removed and the street graded ready for finishing a total of \$8,000 had been spent. Tobin has figured that each lot in this development will average about \$2,650 in cost, including \$800 original land cost, plus the following: storm and sanitary sewer; sewer laterals (no home can be erected in this area unless sewers are installed); cast iron pipe; grading



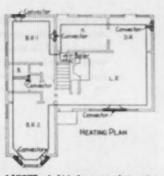
Two more variations of the models being aracted in Huntley Estates



THE COMPACT justicel quarfired het weter boliers are placed in small closets adjacent to the kitchens where they are out of the way but still easily accessible

and finishing roadway; installation of dry wells (roof runoff water cannot be drained on the ground or into sanitary sewers); grading the lots; excavating and back filling; removal of excess trees; water and gas trenching; finishing roadway and installing curbs. Lots run in size from 50 x 100 to 82 x 100 feet.

There are five different houses being built in the development. The twobedroom \$14,240 model with an unfinished second floor is the most popular. Second in popularity is the three



LAYOUT of %4 inch copper hot water pipes into around perimeter under the floor so that extended edge of floor is hosted while pipes are carrying water to receased convectors

bedroom, one-and-one-half bath model priced at \$16,240. There are five model houses open for inspection of prospective purchasers. There is a good variety of exterior finishes used including wood siding shingles, asbestos cement siding shingles, bevel siding, brick and stone veneers. Asphalt shingles are used on the roofs.

Interior walls are finished with the gypsun board dry wall method and are papered. A washable wall covering is standard in the kitchens and on bathroom walls above the ceramic tile wainscoting. Glazed ceramic tile is also used on the bathroom floors. A plus feature in bathrooms is the installation of two small wall chests instead of a single large one. This gives the user two mirrors which can be swung in combination to various positions to obtain different views.

Linoleum is standard on kitchen floors. Counter tops are Formica. A ventilating fan, built-in upholstered breakfast nook seats and a table with Formics top are included in all houses. Each kitchen is fully equipped with an eight-foot electric refrigerator, a gas range and an automatic laundry. Purchasers have their choice of colored kitchen cabinets, bathroom tile and wallpaper. Lightolier's Lightronic controlled lighting, which gives the owner a choice of various degrees of lighting brightness, is a feature which is popular with home purchasers at Huntley Estates.

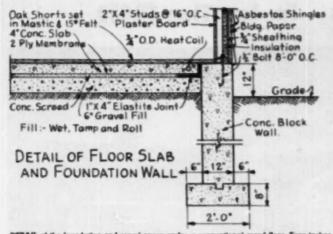
Heated water for the forced circulating convector system, as well as the water necessary for bath and laundry requirements, is supplied by Janitrol Triple Service Heat Generators. These gas-fired units were selected by Tobin and Welson for all houses in the project and were purchased on a single contract. This method of buying is responsible for many of the savings represented in the prices of these houses.

In all models, easept the two-story, the attic area is minished. A built-in stairway, subflooring, stubbed heating and plumbing pipes, electrical wiring and plenty of windows make it easy and economical for the purchaser to convert the unfinished attic into additional living quarters. The



This two-bedroom, single-both house with an unfinished attic is priced at \$14.240. All houses in this development have completely equipped kitchens





DETAIL of the foundation and crawl space under a conventional wood floor. Four inches of mineral wool insulation and a processed paper moisture barrier are placed under the floor. The ground under the crawl space is sealed with two inches of black top



TYPICAL kitchen showing range, refrigarctor and upholotored hreakfast neok acats with lormize-topped table which are standard equipment in these houses

upstairs, or unfinished attic areas in these story-and-a-half houses, are unusually spacious because there is a building code in the municipality which specifies that each singlefamily residence must measure at least 22 feet from the first floor level to the top of the ridge. This makes the pitch of each roof very steep.

Sale prices of the houses include a hard-surfaced driveway when there is a garage. Basic shrubbery is also planted by the builders.

BRANDED PRODUCTS USED IN HUNTLEY ESTATES HOUSES

Armstrong lineleum
Bell & Gassett circulating water pumps
Cedarack siding shingle panels
Chose copper piping for plumbing and
heating
Cakar Carp. dinette sets including tables
Flintkote asphalt shingles and asbestos
siding shingles
Formica counter tops
General Electric & cubic foot refrigerators
Imperial wallpaper
Janitral gas fired hat water bailers.
Kentile asphalt tile
lennos wallpaper
Lightelier lighting flatures
Lockpart cotton insulation
Master Woodworker kitchen cabinets
Minneapolis Honeywell furnace controls
Revere copper piping for plumbing and
heating
Richmond Radiator plumbing fixtures
Royal Rose gas ranges
Sanitas wollpaper
Schlage hardware
Tegca hardware
Unique sash balances
USC asphalt shingles and gypsum board
United Metal Co. hampers and bothroom
cobinets
Universal convectors
Whirlpool potomotic laundries

MAY 1950



TWO-STORY, three-badroom house with bath and a hall in Huntley Estates, priced at \$16,240, on lots varying from 50x100 to 82x100 feet. The price includes the basic shrubbery shown and a hard-surfaced driveway. Molvin E. Kessler is the architect

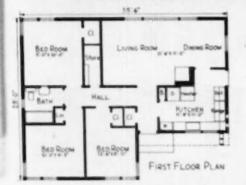


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Prize Winners — For Less Than \$9,000



Most attention at Michigan builders competition was given to this three-badroom Robertson home. Floor plan, below



First place in an architectural competition open to Michigan home builders is awarded to three-bedroom homes that have ample storage and an attractive price tag



FOUR floor plans with three elevations for each are used in Robertson project





OMES offered in the 105-house Woodward Hills development, Royal Oak, Mich., won first price in an architectural competition sponsored by the Michigan Association of Home Builders for their builder menahers. The winning homes have three bedrooms and radiant heat, and are priced at \$7,950 to \$8,400, without lot.

The basic plan in the project has a center entry hall leading to the living and dining rooms at the rear. The living room has large picture windows and a french door opening out to a future rear terrace and garden. Adequate closet space is provided, and additional storage space is available in a floored attic reached by a disappearing stairway. A corner fireplace is located at the wall of the living and dining rooms.

Robertson Brothers, the Royal Oak builders who developed the project. enclose a home in two days, then pour a 4-inch concrete slab floor in which 15-inch copper pipes for radiant heat are imbedded 12 inches O.C. A trench is dug to frost line; then an 8-inch foundation wall is poured to within eight inches of finished grade level. One 8-inch concrete block is placed on top of the foundation wall to bring it up to grade level, then an L-shaped concrete block (designed by Covert Robertson, Jr., senior member of the firm) is placed above that. This block is 8 x 8 inches, with 4 inches taken out of one corner to provide a base for the plate and support for the edge of the floor slab. After the foundation is poured and concrete blocks laid, conventionally framed exterior walls are built, and rough framing proceeds until the house is under roof. To conserve floor space, a Van



ROBERTSON homes have varied exteriors. Note Van Packer Chimney

Pucker chimney is used in several of the homes. The radiant heating system installed was designed by the Robertson Brothers, who use panel lines of identical length. With their system, they say, heat loss and resulting temperature drop in each line is identical. Oil and gas fired automatic York Shipley boilers, manufactured by York Shipley, Inc., are used.



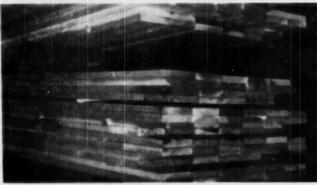
MAY 1930

Lumber Company



1.

LUMBEB at Hines yard in Chicogo is sturked so that such are storged gorad, enabling lift track to raise ano soid at any number of boards required. Ross lift is shown in first stops of lifting operation

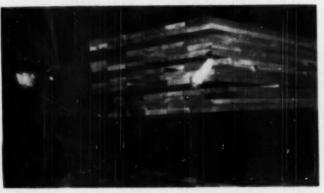


OW power equipment saves time and money for the lumber dealer was graphically demonstrated recently in Chicago at the Edward Hines Lumber Company yards. A program sponsored by the Hines company permitted more than 100 lumber dealer guests to see firsthand some of the most advanced methods of material handling. Though the Hines yard is one of the largest in the country, handling equipment demonstrated is adaptable to both large and small yards, and visiting dealers felt their time was well spent at the program.

In the first part of the demonstration, dealers saw a modern lift truck at work, moving lumber inside a Hines shed built to provide ample room for the free movement of lift and straddle trucks. An ideal shed for this power equipment, manufacturers say, is one with roof trusses where four walls support the roof and no intermediate posts of any kind obstruct the floor level. In the Hines shed, dealers saw a lift truck move at rapid speed, lifting unit loads of lumber, carrying it to a destination, and deftly placing it on top of a high lumber pile or on the ground as though it weighed no more than a pound. The Hines company stacks the lumber (see photographs) so that a



AFTER one end is raised, a 2x6 is inserted to hold the lumber up until lift truck moves around into position to insert forks under canter al load. The operation requires two men and lift truck





STEEL strapping device draws high tensile steel strap around unit of lumber, and firmly secures it at Hines demonstration

- 3.

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SOARDS are alaft here. Entire operation takes only a few minutes. More than 100 lumber dealers watched demonstration. Elustrated here, aponsored by Hises Lumber Co., at their Chicago yard

Demonstrates Materials Handling

Retail lumber dealers turn out on mass to see how power

equipment is used to cut cost in a modern lumber yard

lift truck can approach a pile of lumber and take any amount desired at one time.

In the second part of the demonstration, dealers saw how high tensile steel straps are used to hold lumber units together, making it easy for one man, by means of truck transport, to move them around a lumber yard and to unload them in one single unit instead of in separate unmanageable pieces. It was shown how boards can be unloaded at their destination without loss of time or lumber breakage; how bundles prepared in the lumber yard provide advantages for the customer and will not be pilfered while idle on his property, and how the bundles will not be dangerous to curious children exploring new buildings.

How a lift truck can quickly unload plywood and wall material from a box car opening was demonstrated to dealers in the third part of the program. The bundled plywood, held irmly together with steel straps, was set in the boxcar opening on bucks ($4 \times 4^{\circ}$ s) to provide a space for forks of the truck to be inserted.

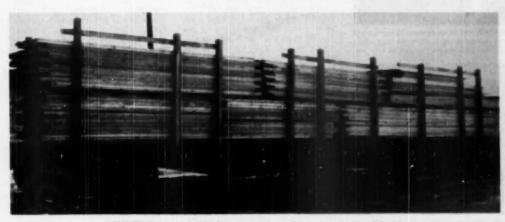
Flatcar loading and unloading was demonstrated next, again with one man driving a lift truck, accomplishing many times more work in a few minutes time than several men could do in a full day. Philip Creden, advertising manager of Hines, in charge of the program, said it is not difficult with his firm's power equipment to unload a flatcar in approximately twelve minutes.

Interest in the last part of the program in the Hines mill centered around a power saw equipped with a conveyer table and safety power feed used for self-feeding of material through the saw. In the demonstration, the saw ripped 2 x 12's, 16 feet long, dadoed the same material, and with shaper cutters attached, the saw did shaping.

Materials handling equipment domonstrated at the Hines yard included Ross carrier and lift trucks, Ross Carrier Co.; Hyster lift trucks, Hyster Co.; Gerrard steel strapping, Gerrard Steel Strapping Co.; Acme steel strapping, Acme Steel Co.; Signode steel strapping, Signode Steel Strapping Co., DeWalt Model GEV saw, DeWalt, Inc.



PLYWOOD sheets are strapped with two No. 8 gauge round steel strap at Hines yesd



STRAPPED flat carload of lumber units can be made up of various langth boards.



LATHROP E. LEISHMAN. president. (right) talking to CLINTON CHURCHEL CLARE. first customer of Crows City Lumber 6 Mill Co. and a steady contemps since 1964



City yords and mill offer unique service



OFFICE and sales counter. Note counters are mounted on custors so that their arrangement can be changed at any time



ODD6 and End Shed on Green and Vernon where customers serve themselves

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Mechanized Operations

Power equipment has made possible the steady growth and expanding business of this mill and yard where "the customer has been king" - since 1904

AITHFUL adherence to a slogan and a policy over a period of two generations has steadily huilt the business of the Crown City Lumber & Mill Co., Pasadená, Calif, until today it covers five acres, sprawling out in all directions from the original site estallished in 1904 by the father of the present owner. The slogan, "The Customer Is King." formulated into a policy and instilled into the minds of all employees, is responsible for this growth.

William L. Leishman founded the business 46 years ago in a small plant on ground where one of the present buildings now stands. Since that time the organization has increased many times and the physical facilities have been enlarged accordingly. There came a time when space adjacent to the first building was not available and space on the other side of Green Street had to be used ; this took care of the situation for awhile but soon it was necessary to have more room and the firm had to cross Vernon ave. As a result the plant is in three sections as shown on the diagram. The building which houses the heavy equipment such as the resaw and the gaug rip saw and the moulding shed, is a full block and a half from the siding where cars are unloaded. The storage plant across Vernon is about the same distance.

Under these conditions it was natural for the company to acquire mechanized equipment for handling lumber and they now use two Gerlinger Carriers and a Gerlinger Lift. all of which dart in and out of the various sheds and yards with bewildering speed. The big Gerlinger, 30.000 pound capacity, handles lumber in the yards while the smaller carrier with a 14,000 pound capacity can get into the mills and the sheds. All timbers, rough lumber and some dimension lumber are stored in the open adjacent to the siding, some to be airdried. They are stacked in 20 foot piles by the Gerlinger lift. The lift is, of course, also used for unloading gondola cars and for stacking wallboard and other flat items in the dry shed, as well as for other loading and unloading operations.

The small Gerlinger is the real work horse because it is used to deliver material to the mills and to pick up loads of outgoing humber to take it to the shipping room. Whenever orders are made up in any of the storage points the material is placed on carrier blocks with one of the top hoards marked to indicate whether the material is to go to a mill for processing or to the shipping room for loading on a truck. The small carrier picks up these loads as fast as the operator can get around to them.

The company operates three roller bed trucks and two pick-up trucks for delivery of lighter items. The pick-up trucks are equipped with a metal frame which permits long lengths to be loaded with ends extending over the cab of the truck. All loads are strapped with steel bands which facilitate unloading from the roller bed trucks and which also protect the material against theft to some extent, while it is on the customer's lot awaiting use. The strapping is done with a Signode Steel Strapping Coil Box.

Although the company carries the most complete stocks of lumber of all kinds to be found in the area and does a substantial volume on staple items with contractors, industrials and the general public, perhaps the most important end of the business is the custom millwork department where a combination of expert "know-how" plus tens of thousands of dollars worth of fine machinery enable them to turn out millwork and cabinet work of unusual quality and variety. Custom pews, stairways, doors, wall panels, mouldings, cabinets, ornamental woodwork of any character-is made quickly and economically in these mills. The mills are devoted entirely to custom work and no stock sizes are run except when they are part of a custom order.

Every effort is made in the mill to avoid unnecessary handling of material. Each order is hauled from macline to machine on hand trucks; even many of the machines are on wheels so that the work can be brought to the machines or the machines to the work, whichever is best for a particular order. The equipment in the main millwork plant is by far the most extensive and complete in the area and includes the following saws and other machines: De Walt Cut-Off saw; 2 Oliver Table Saws; Crescent Table Saw; 36 inch Band



GERLINGER Carries a real workhorse for the yards and mill

Saw (name obliterated); Boice-Crane Chop Saw; Beach Jig Saw; Mattison Straight Line Ripsaw; Crescent Jointer; Porter Jointer; Famous Jointer; Greenlee Planer; Buss Planer; Greenlee Mortiser; 2 Greenlee Tenoners; Smith Sticker; Crescent Sander; Berlin Drum Sander; Workage Coping Machine.

In the mill across the street where the heavy machinery is used there is a McDonough Resaw, Greenlee Planer, a gang ripsaw made by California Engineering & Machinery Works, Yaies sticker and two Berlin stickers. Stored near these last three machines are thousands of moulding knives.

With the three Gerlingers and all of the above machinery plus five trucks. maintenance is an important item and the policy of the company is to immediately repair any machine the moment it shows any signs of wear or being out of order. One of the men is a good mechanic and he does the work if cossilie; if not, outside help is called. Safety is also given much attention. A meeting of all surerintendents and their assistants is held each month to discuss ways and means of preventing accidents. Signs posted throughout the mill read "Please Do Not Talk To Men While Working-It Might Mean Losing A Finger."

Lathrop K. Leishman, president of the company, is proud of the husiness philosophy established by his father and constantly strives not only to furnish materials of better quality but to find better methods of displaying and selling them. An example of this better service is tound in the unique Odds and Ends Shed (see opposite page).

Located on the corner of Green street and Vernon avenue, this selfservice sidewalk shop uffers items of all kinds likely to be wanted by the handy homeowner, ranging from fence pickets, trellis material to pieces of

plywood 4 feet by 8 feet and including doors, and screens, price plainly marked on it. When a customer has made his selection he gets a sales slip from an attendant and takes it into the office next door to pay the bill and then puts his merchandise into his car. A parking lot

GERLINGER Life aids in loading and unloading all types of materials behind the shed is a convenience to those who can get into it but on Saturday mornings is not nearly adequate for the crowds who patronize this service and whose cars line the street for a block in both directions.

Another somewhat similar service is available to both contractors and consumers in the storage yard across Vernon avenue where stocks of Redwood and Douglas Fir boards are carried plus a few other staple items. One corner of this yard is devoted to miscellaneous piles of further each with a price marked on it for the whole load.



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More Power For You

In the little town where I grew up, Tom Rhodes could saw a based in two quicker and more accurately than any other carpenter in the community. His saws were his pride and joy. He gave them even more attention than his razor. They not only were kept sharp and shiny, but they were protected meticulously from all harm. The tool chest where they were kept was a joy to behold because Tom devised a method by which the teeth of the saws never touched anything other than the soft protective slots which held them in proper place.

Tour was a great man with the saw and it was a pleasure to watch him go about his job of cutting a board in two. He would first size it up with a practiced eye. Then he would pick up his square, pull a carpenter pencil out from under the brim of his cap, mark the board accurately in the proper place and then fall to with his beloved saw.

Singing Through The Knots

We used to stand and watch Tom as the saw sang through the wood—wet, dry, bard, soft, and even the knots, which were the bane of the existence of the less experienced carpenters.

Tom could follow a sawing line as accurately as any precision machine that was ever put into a factory. When he started across the board he never stopped until the saw had cut its way through the entire piece. At regular intervals, he blew the sawdust in all directions with a blast of bellows-like proportions. His lung power enabled him to keep the line free of all sawdust accumulation. When he had finished with any particular saw cut, he picked up the ends of the pieces, ran his thumb along the edges, laid them down with a gleam of satisfaction in his eve.

In sharp contrast to Tom, the efficient sawyer, was Charlie Boyles who couldn't saw a piece of hot butter in two and do much of a job of it. Charlie's saws were rusty. They were seldom sharp. But even if he had been given the privilege of using one of Tom's best tools, he could not have followed a line to save his neck.

Between Tom, who stood at the top of the list in efficiency, and Charlie, who never let anybody occupy the lowest rung of the ladder, there were many carpenters of varying degrees of efficiency in the community. Each had his rating—good, bad or indifferent.

"If you can get Tom Rhodes to build

"Smooth Sawyer Tom" was a joy to beheld, but modern tools help bridge gap between his work and that of "Crooked Kerf Charile"

your house, you will get a good house," was the invariable verdict of home prospects. But, of course, the problem was to get Tom to do it because be was always booked up so far ahead. On the other hand, Charlie Boyles was always looking for a job. And, naturally, the difference between the two was the direct result, not only of the way they kept their saws but how they used them.

Power Tools Bridge Gap

Down through the years it is interesting to observe that ways and means. have been developed by inventive minds to bridge the gap between Tom and Charlie. The end result has been that Charlie is now able to closely approach Tom when it comes to doing a good job of sawing and, of course, it was all brought about by the development of power tools. Charlie's inability to follow a straight line has now been overcome by the gauges which are now employed in power equipment to make it impossible for him to saw a crooked line. The board is slapped onto the machine and pushed into proper place. The whirling saw bites in at the precise spot where the cut is to be made and in the twinkling of an eye the job is done.

Charlie is entirely capable of picking up a board, putting it in place, pushing the button or pulling a lever and taking the boards off the machine.

Tom, on the other hand, is entirely pleased with the fact that his employees are able to take over a part of the job that he alone could do accurately. It enables him to build more houses and to do a better job than was the case when the entire burden of accuracy rested on his shoulders alone.

It perhaps is needless to call attention to the fact that accuracy was likewise more or less difficult on the part of anyone who was called upon to saw a board in two atop a sawhorse perched somewhat precariously upon the irregularities of the ground, which invariably prevailed on the building site. Despite the fact that accuracy was absolutely essential in catting the several thousand parts which made up the construction of a home, it should always be remembered that this accuracy was achieved under exceed-

By R. E. Saberson

ingly difficult circumstances.

Neat Balancing Act

In no other industry were workness required to handle long boards in windy weather, and to attempt to hold them properly in place across a couple of sixwhorses on uneven ground.

Notwithstanding such difficulties, good construction was available through such individuals as Tom Rhodes, who not only knew his saws bat how to use them.

As the years went by, it became necessary to speed up production on the building site, or at least to improve the workmanship of the majority, who were not as efficient as Tom. That, of course, was a difficult problem since it meant that each and every one of the other workmen would have to do exactly what Tom had done in order to become an expert with the saw. That, naturally, was impossible because the majority simply didn't have it in them.

The coming of power tools undoubtedly is the greatest thing that has happened to the light construction industry, and this is as true of the building of a home as in the erection of a farm or the simplest sort of an agricultural building.

More Tools, More Homes

Power equipment on the building site, or anywhere else, does not necessarily mean that fewer men are employed in the light construction industry. As a matter of fact, exactly the reverse is true for the reason that when you make it easier to build a better building and do it quicker, it quite obviously means that more and more people can become the happy owners of such structures.

The scene on the building site today is something entirely different than when Tom Rhodes spent half the summer building a house. Now they go up like magic, and the best part of it is that the cuts are made with precision accuracy by practically anyone who happens to be employed on the job.

Tom Rhodes, or his counterpart, lays out the work. The rest is comparatively easy, since each and every part fits into place accurately because the cut has been made with precision machinery.

Nothing is more interesting than to ponder the widespread changes that have taken place in construction since (Continued on page 150)

These Manufacturers Produce Powered Tools and Equipment for Builders

- Allis Chaimers Mfg. Co., 1135 S. 70th Sr., All-weeksen I., Wis. (Earth-maring equipment) American Flace Surfaceing Michine Co., 315 S. Clair St., Toirdo, Ohio (Freer surfacing mo-chines, Partable closethic same, Perfable closethic charges, Partable closethic same, Perfable closethic sander)
- sender! American Sure Mill Machinery Co., Hanhatteteun, H.J. (Power cores and sevenital J. W. Agayr and Son. (son., P.O. Bos 649, Br. Potesberg 2, Fio. (Castorie black machinery) Arraw Castractors Bayisment Co. 2020 Weland Br., Okiango 12, III. (Beall stooter leader) Atlas Pres Co., Raismannes, Mich. (Power cored) Artista Free Co., Raismannes, Mich. (Power cored) Artista Free Co., Raismannes, Mich. (Power cored) Artista Free Co., Baismannes, Mich. (Power cored) Action (Science Construction Co., 101 W. 87th Sp., Aser Prachatts, 692 S. Santa Fre Area, Les Angelos, Catt. (Proventit setting machine)

- Barnes Hig. Co., 431 N. Main Sr., Hanshald, Ohio, IPvengal Barver Pipe Tools, Int., Warren, Ohio. IPvetable pipe and balt threading exachined but Aircord Corp., Pime Marco Dir., P.O. Box 1, Bedials 3, H.F., IPvene operated wheetherwork benching performed by Mich. Block and beich exaking performations.
- making equipment? lack and Decker Mig. Co., Towane, Md. (Electric Black a

- Binch and Benker Mig. Co., Yowson, Mid. (Electric teold)
 Binur-Knau Co., Farmore Bank Bröy., Pittchungh, Pr., Transk missen)
 Balco-Crane Co., 920 W. Central Ave., Toleda & Ohio. (Woodworking experiment)
 Bradford Machine Taol Co., 659 Evens Sr., Cincinnall, Ohio. (Prover hand areas)
 Brigge and Bradford Corp., 2711 H. 13th Br., Mitwooder, Wis. (Retable engined)
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- Caterpillar Trucker Co., 600 W. Weshington B., Boat Desrin, HI. (Berth-moving equipment) Chain Belt Co., 1600 W. Bruro Se., Miliwaukee 4. Wis. (Cancrots mitors) Champion Mig. Co., 2028 Weshington, St. Louis, M. & B. Manufarturing Co., 2840 N. Patener C. H. & B. Manufarturing Co., 2840 N. Patener C. H. & B. Manufarturing Co., 2840 N. Patener Charater Div., General Betres Corp., General Motors Bidg, Detroit 2. Mith. (Trucks) Charge Parumatic Teol Co., 6. 8. 44th St. New York, N. (Partable electrics and Creek Equipment Co., Industriel Truck Div., Battle Creek Mich. (Lift trucks) Clarke Sanding Machine Co., Muskepon, Mich, "Sanding mechanos]

- (Sanding machines) Clapper Mig. Co., 2000 Warwich, Kanoos City B, Mo. (Mosotry sews)

- Cripper Mig. Co., 2008 Werwick, Konnes City B, Mo. (Mesonry serve) Comet Mig. Co., 9233 Niceliet Ave., Minaceparlis, Minn. (Pewer head hyok) The Cirveriand Trencher Co., 20100 St. Clair Ave., Cirveriand Trencher G., 20100 St. Clair Ave., Cirveriand Machinery & Sogaly Co., 2021 Samte Consolidated Machinery & Sogaly Co., 2021 Samte Ave., Ios Angeles, Calif. (Modiei search for Iowani (Concrete misors, Insiste) Commise Periodic Teel Bir., C. B. M. Cerg., 4740 Berronsweed, Chicage, III. (Periodic electric sews)

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- olco Appliance Div., Lyell & Whitmey Sts., Bechester, N.Y. (Pneumatic tools) avail Sorfacing Machine Co., 7433 W. Davidson B., Davati, Mich. (Pnetable electric sandard) a Vilbias Co., 200 Phillips, Taledo, Ohio. (Paint a Vilbias Co., 200 Phillips, Taledo, Ohio. (Paint D-8.

- an krimeta L.C., 2001 Printings, torseau, Unico, Francis Ingenizing coordinations of the second second second Devised Products Ca., 154 Pountain Sr., Lancastar, Pa. (Prever servet) Dedge Dir., Chryster Carp., P430 Joseph Campau Are., Deriven, Mich. (Prock & prevere vergen) W. E. Donn Ca., 415 W. 23rd Sr., Holland, Mich. (Camprete black mechines)

- Emis Supply Co., 334 First Su., He. Minneapolis, Mian. (Power sorve) Easide Mig. Co., 1950 S. Santa Fe Ava., Los Angeles, Calif. (Concrete mixere, plaster mixere, haiste, road cellers) Bearody Brikanw Co., 1969 So. Michigan, Chi-cago, El. (Miscamy sowa)

- Federal Meter Truck Co., 3780 Fedaral Sr., Dobals, Mich. (Trucks) Flaming Mig Co., 4985 Fyler Ave., Sr. Louis, Ma. ICantola Biodi machines, controla miseri The Feder Co., Nanda N. Y. (Endroch miseri) Feder Mig. Co. 2300 N.E. Frith Sr., Milmeagails 18. Milm. (Austandic care Speci

- Ford Compat Black Mach. Co., Cedar Folls, Jawa Coment black mechines! Ford Mater Co., Deerbern, Mich. (Trucks)

- Frei Ander Lut, Dottent, Mich. Hauss General Flanceton, Im. 235 Binh Ann. Heur Yuck, N.Y. (Flance sorfweing machines) Gottens Bres. Sn. Heuren, Mich. (Power barenet G.H.C. Trach & Camb Din., General Matters Gorp., 400 Sauth Beacleward, Paraties 11, Mich. (Truckal Gilton Bres. Mills, Ca., Fedanis, Wis. (Concrete misses, pisater misses) Pho German-Rupp Company, 200 Bewenen, Mans-Beid, Othe. (Pomps) F. C. George Machine Co., 100 S. Wootmoncland Dr., Oriendo, Fin. (Concest block machines) Genere Registerent Corp., Handen, Com. (Bediat const)
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- energy Hisgor Co., St. Cloud, Minn. (Floor machineo) Hall Mity Co., 20th & Greve, Bakland, Colif. (Floor enders and polithers) Homolito Corp., 67 Evendolo Aus., Part Chester, N.Y. (Rottoble generations)

- N.V. (Anruch of Revision Annu, Part Chester, Frank G. Haruph Ca., Ubertyrillo, HJ. (Buildonen) The Hyster Ca., 2902 N.E. (Cachamas, Partland, Oro. (Lamber carriers) Histochesen Mig. Co., Morristewn, Pa. (Woodwark-ing machined)
- Independent Penumatis Leel Co., Beste and Claim Ste, Aerone, III. (Portable alectris cover, drills, hoemmers, albblere, inspect verschelere, grinderei Ingereal-Band Ca., 11 Broadwary, New York 4, R.Y. (Campersson, Power drills) International Mancember Ca., 198 N. Michigan Are., Ohicage, III. Thurkal

- Jockson & Church Co., 221 W. Hamilton, Soginare, Mich. (Brick and biock making mechanis) Joogne Mechine Co., 500 Spring Rr., Colombus 12, Ohio. (Concrete misses, litters, pumps, balat) Jorocheg Sander Co., Inc., Mexaminine, Mich.
- Partabi
- Kott Tool Co., 58 Third, Cincinnati, Ohio IPnou-
- Kott Toei Ca., 38 Third, Checomam, umm treve-matite tamparel King Mig. Ca., 3165 W. Chicage Are., Chicage 22, 88, Ubertable halos 403 Kastkerbecker Mitty, Academic Material Mich. Conscrete misser, prever wheelbereuwd Rohar Ca., Rabler, Wis. (Partable scientie pienet) Kather Ca., Rabler, Wis. (Partable scientie pienet) Kuth. Mis. Ca., Part Weabington, Wis. (Conscrete microst)
- Lansing Co., 600 Morth Coder St., Lonsing, Mich.
- Millianni Laffana Changte Ca., 1970 Final Ann, Nill Color Regulds, Lenes, Ularth-maving casigmical Limelon-Schlader Filear Mech. Ca., 1250 W. Von Buren St., Chicage 7, III, iffeer senders and fear golisheni Limcine Treater Ca., Anadia, Calif. (Fronters) Lim.i.der Ca., Molland. Mich. (Convite black mo-chines)
- Mach Interne mai Mater Corp., 350 Filth Ave.,
- Mack International Marker Corp., 230 romm Ares., New York, N.Y. (Trucks) Medi Tool Ca., 7740 S. South Chicago Are., Chi-cago 19, Nil. (Bischic vibender, partable power tower, clertific plannel Martine Pumpa, Bidgerwend, N.J. (Pumpa) Martin Fusproefing Corp., 2100 Millitery Ed., Chicago 19, N.Y. (Marany corp.)
- Buffalo 17, N.V. (Moss
- Martin Füceproching Corp., 2100 Military Ed., Buffais 17, N.Y. (Massary some) Master Woodwarker Mtg. Ca., 407 E. Fert B., Derinal 20, Mitch. (Power sowel Miancen Condituction Co., 121 Nen. Lediow, Daylan, Ohia Skeady mit trucks.) Mine Safety Aprilatores Ca., 201 H. Breddeck Sr., Pittabargh, Pa. (Power someterid taxals for decising Military Sciences Ca., 201 H. Breddeck Sr., Pittabargh, Pa. (Power someterid taxals for decising Military Sciences Ca., 201 H. Breddeck Sr., Perilaad I. Ora. (Cancerto micror) Mailton Machinesy Ca., Matuchen, N.J. (Cancerto micror)

- microsoft Sam Machay Co., 1621 Locust, Kanaos City, Ma. ICameyerst Haltiples Concrete Machine Co., Einer, Ohie. ICanrete block machines! Milwarkse Bistein: Tool Corp., 5116 W. Stote, Milwarkse, Wis, Pertuble power toold Neison Stud Wielding Dir, Marten Gregory Corp., Lorain, Ohie. (Stud weteling employment)
- D. W. Onge and Sone, Inc., 43 Reyalsten Ave., Minneapolis 5, Minn. (Pertable pewar glants)

The Oliver Corp., Clotes: Bir., 19300 Racial Ave., Cloveland, Ohio. (Barth maving equipment) The Depose Co., Marion, Ohio (Barth maring

- equipment) The Online Mdg. Co., 3046 6, 4147 St., Cleveland 3, Ohio. (Figs cutting and threading machine)
- Ohio. (Pipe calling and throading machine) Powhard Mile Ca., Nahla & Madach Ha, Indiana-poils, Ind (Boregolds, particular power sens) Ports Bandensking Machinery Ca., 1228 Kanarhen B., Clasimenti, Ohio (Piennes) Porto Ca., Dowengier, Mich. (Piennes) Porto Cable Mashine Ca., 1714 M. Salimo B., Sertters, N. T. (Porthöft pawer local) Portolain Electric Taolo, Inc., 235 W. 79th B., Chicago, N. 1. (Berthis pawer) local) Power Eleng Teal Corp., 1618 N. Ventesurer Area, Partined, One. (Inspect local) Power Eleng Teal Corp., Warsaw, Ind. (Pewer Inclu)

- handsill fast Corp., Warsow, ted. (Pewar hadsil In Prime Maver Co., Muscatino, Lawo, (Pewar Barrow) 76
- Ransome Machinery Carp., Dunslien, H.J. (Campaid
- Ramsente Marchinery Carp., Dannillon, H.J. (Canacult micera) R. B. Reed Carp., Three Bivers, Mich. (Canaryle blocks and brich making methics) Build-Way, Inc., 1925 First Arm., N.R. Cader Beglide, Inven. (First canadult Perser Test Div., Rostweill Mitg. Co., 434 8, Viennu Arv., Mithewalen, Will, (Further source) Res., Mich. (12) 231 Sales Harber, Besten Har-ter, Mich. (12) 231 Sales Harber, Besten Har-Ben Mich. (11) 231 S. Washington D., Lanzing, Mich. (Trucks)

- Secon Devick Co., 3101 W. Grund Ars., Chicago 22, 10. (Deviced) Beammetry, Int., 1216 Whird D., S., Minneapalls, Minn. (Power shop tools) 5.18 Comparison, 204 Ellion S., Foreton, Mich. (Concrete black machines) Sellower, Inc., 2023 Elston Arm., Chicago, 10. (Portshile clothic saws, floor sandors, piezwe-news)
- sound L. Lomith Ca., 2023 N. 32nd St., Allowandese, Wis. (Concrete misser) The Spord Carp., 2023 N.B. Sandy, Partiand, Gos. (Source Mig. Ca., 1m., 603 S. Bescher, Adrian, Stanlow Works, Neuron Britain, Com. (Partybio provent tools)

- Staniev Wecks, Now Bettein, Cont. Franzer-power toolol Beence Carp., 2130 W. 121et D., Cleveland, Ohio. (Power extended tools for diricing sheets into store) and concrete! Been Machinery Ca., Manilux, N.Y. (Bone sawa) Synthea Company, Namer City, Pa. (Power hoeld Toolkroft Corporation, 467-451 Michaeldow B., Weitenbury OI, Cann. (Weedworking machined) B. K. Fyra Co., Forces Lake, Minn. (Concrete block machines) Devret Productics, 204 Hortland Ares., Buffato 17, N.Y. (Brew chargeoning machines)

Uniflow Mig. Co., 1525 E. Lake Ed., Eric, Pa.

Victor Engineering Corp., Wilson Ave. & Green Lone, Bristol, Po. (Mozomy sewi)

Lone, Brizel, Pe. (Moseney sew) 4. 0. Wollies & Ca. 134 S. Colifornia Are., Chi-Weilers: Source & Ca., 134 S. Colifornia Are., Chi-Weilers: Supplies Mill, Co., 1300 Diversey Paulo-wory, Ohicogo, III. (Pipe banding machinea) Weilers-Torrers Ca., Ioz., 439 South Are., Plain-Soid, H.J. (Parene sourci Fred W. Wappert, Ioz., Mayvollo, M. Y. (Postakie preser sourci Wayre Imagentis, Ioz., 13 M. Taird D., Columbac, Ohio (Machine for humping caphan arrhanea) The White Motor Co., 842 E. (Ph. Dr. Cloveland, Ohio. (Trackel Whiteware Mily, Co., 2149 Coolma Are., Los Ohio. (Trackel)

Ohio, (Tracke) Whiteman Mig, Co., 3349 Caultan Aee., Los Angeles 26, Calif. (Power controls Backing ma-chine and power controls Wolcard Brid., To-indo, Ohio Lorega and tracks) Wederk Electric Tool Corp., 4627 W. Nuess Sr., Chrisoga A. Ell. (Electric kannaver), Wedefounders Tool Works, 723 S. Jedforsa Sr., Ohiosga, HJ, Shapers, Mappin spinifes, control Windowski, Marka, Mass. SCamporator, 201

RI. Products Co., 4817 Airport Way, Boattle, Wesk.

Yolo & Towne Mig. Co., Philadelphia. Pa. (Pumps, heists, industrial tracks, scaloo)

Zogelmayor Cost Stone Black Machinery Co., Bay City Mich. (Cancels black mathines)

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(Pumps)

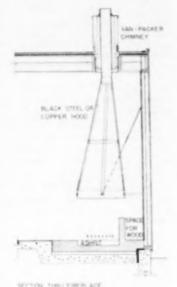
and air teals!

Woodwarking machines

AMERICAN BUILDER PRIZE HOME COMPETITION

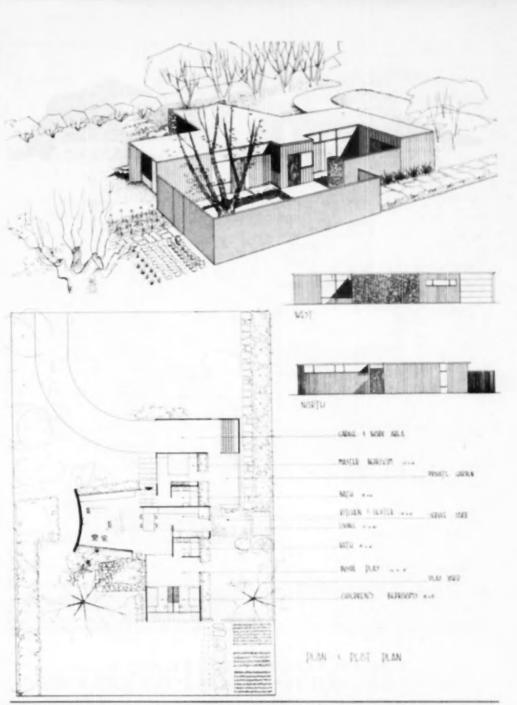


The design submitted herewith and the six that follow were awarded honorable mention in a competition for women architectural students sponsored by the American Builder and the Women's Division of the National Association of Home Builders. The contest problem was to design a single-family dwelling for a family in the middle income bracket





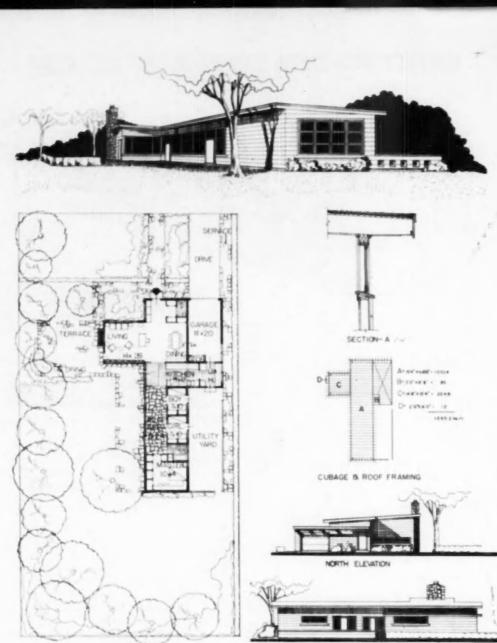
DORA L. WIEBENSON. NARVARD GRADUATE SCHOOL OF DESIGN. CAM-BRIDGE. MASS. - Good points: Compactness of plan and simplicity of mossing: orderly arrangement of service units: departmental bathroom strategically located with relation to living and slooping quarters. Interesting solar treatment of south exposure; openness to prevailing breases. This home was criticized for the position of the front entrumce which causes quests to pass workroom and hitchen; for the difficulty to convert play area into bedrooms when children grow up; for lack of adequate cross vestilation in bedrooms; for allotting too much of the living room area to the fireplace; and for the front door that opens into living room



MRS. JEANNE SCHLESINGER. UNIVER-SITY OF ILLINOIS. URBANA. ILL.-Good points: Compact plan: service potion well related to dining area and family entrance; fonced in outdoor areas well placed in relation to adjoining rooms;

extensive use of folding doors. Criticlood for the wide separation between moster bedroom and children's bedroom: because kitchen is too open tewards living room: because of the costliness of the curved stone wall of living room. for insufficient apace for utilities and storage areas; for fothers to include a fireplace; because children's bedrooms were too cramped to accommedate inside playroom

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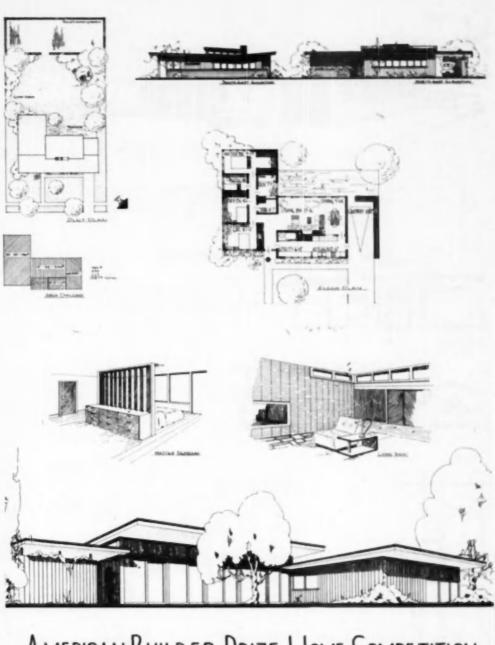


FLOOR PLAN

WEST ELEVATION

AMERICAN BUILDER PRIZE HOME COMPETITION

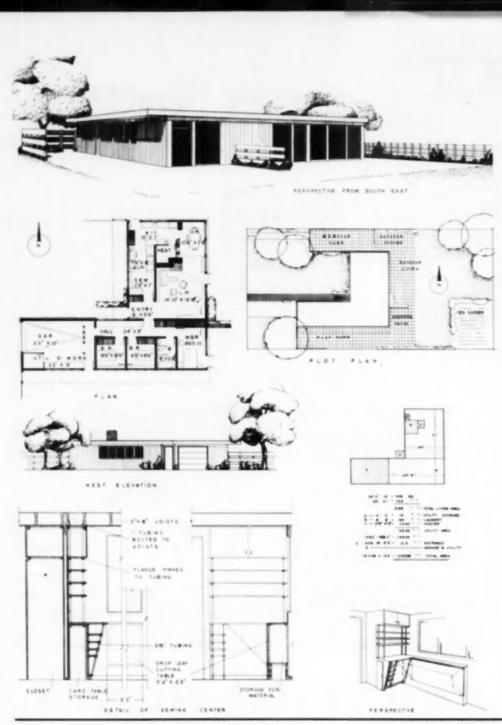
MABGARET E. HUDAK. CARNEGIE IN-STITUTE OF TECHNOLOGY. PITTS-BURGH. PA.-Good points: Openness to prevailing breezes: elements el service well related; convenience of cutdour play er utility yard to children's bedrooms. Criticised for inadequate storage and closel space; for somewhat forbidding appearance of street elevation; for lack of window in powder room; for use of living room as passageway; for reducing the size of boy's and girl's rooms to provide for adequate play area: for long corridor-like structure of bedrooms: because the main entraince to the house was rather distant from all other elements



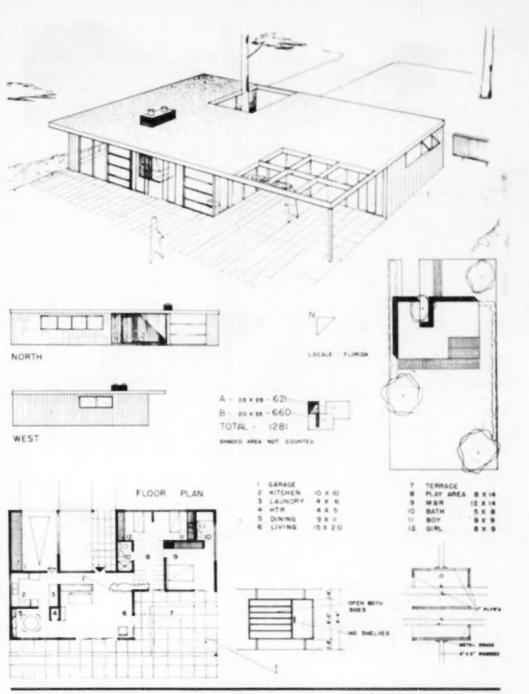
AMERICAN BUILDER PRIZE LIOME COMPLETITION

E. ELIZABETH TRAINER. UNIVERSITY OF ILLINOIS. URBANA. ILL. Good points: Compactness of plan for house proper: consolidation of living areas into sizable open space; unique wood acreen separating elseping and dressing portion

of master bedroom; splendid fenestration of south living room wall. Criticized for having only one bathroom in a potential four bedroom house; for long narrow hall in alsoping quarters; for lack of ploy area for small children: for the use of aliding doors on exposed living room wall; for lack of a service yard near kitchen-loundry; for having principal bedroom expessives toward side lot line



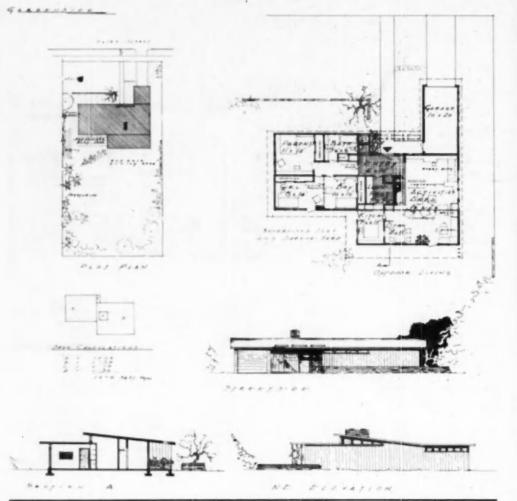
IOY MILAM. TULANE UNIVERSITY. NEW ORLEANS. LA. Good poin. Simple construction methods employeduse of bedroom hall as play-apace: compact plan with good circulation; service units well placed; sheltering of front entrance and pleasing external appearance. Criticized for the extensive use of glass sliding docer which indicate house to be distinctly regional in planning; for inadequate utility apoce: for cramped kitchen news with no spece available for informal dining; for the cramped dining room which allows no provision for quests; for the questionable type and size of fireplace; and for the minimum sizeping lacilities provided for the children



ANN NICHOLAS. CARNEGIE INSTITUTE OF TECHNOLOGY. PITTSBURGH. PA. Good points: Simplicity of plan and mass; service portion well related to dining room and family entrance: unuscal combination of kitchen. Jaundry and sew

ing units all confined to one room. Criticised for lack of cross rentilection in all rooms except klichen; for separation of garage from klichen units; for the rather flat and uninteresting appearance of street front; for the imadequacy of both the children's bedrooms and the dining room; for the complete separation of play and service yord, making supervision of children at play impossible from the living or work area of house





NINA PENCE COLLEGE OF ARCHITEC-TURE. UNIVERSITY OF MICHIGAN. ANN ABBOR. MICH.—Good points: Splendid supervision of outside play urea from kitchen: use of folding partition in converting children's bedrooms to inside play area; living room separated into group activities area; compact plan. Criticiaed for carelees handling of leanto portion of living room; for lack of cross vestilation in hedroams; for having to pass through lowndry to enter kitchen; for exportation of service units such as kitchen and garage; for unimposing street elevation; for a lack of buik streage and closets; and for the minimum area alletted to both the utilities and the kitchen

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we make sure Ro-Way doors will. serve BETTER...LONGER!

Each door is built completely in the Ro-Way plant. Then erected by one of Ro-Wwy's national network of selected distributors.



Only high quality lumber is used. Personally selected by our own buyer at west coast mills.

Panels are made of 3-ply, exterior grade Douglas Fir plywood for maximum resistance to moisture,

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Tenons are cut on both ends in one operation for efficient construction.

BETTER FINISHED

Muntins, rails and stiles are accurately squared up.

Sections are drum-sanded to a fine preliminary finish.

Ro-Way's own workmen then do the final finishing with hand sanders,

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fee your closefford tail a directory fo in and address of the Ro-Way Distrik inned to give you appart installation on



Ro-Way Overhead Type Doors are available for all Industrial, Com

and Residential Installations.

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MAY 1950

127



Model A-9" 3% capacity \$135 00 with metal case Model A-8"

2'1 copacity \$115 00 ... use mp Fred W. Wappet Saw to it lumber, terra catte tilo, and cinder lacks. It's really a time-sarer." —Centracter

Mand Saw has paid for Itself many filmes: -Cootractor Solidar

Fred W. Wappat MAXAW gives builders maximum performance for a 6" saw!

The MAXAW sectores built in depth ddjuatment $(T_4 \to 0.2)_{16}$ of physical built in bevel oxigations (0, 10, 145). Has right starting tip lence. The MAXAW rule to full $2N_4$ depth, cuts $(P_{22}, at 45)$ angle. Even though labels is filed mony times, the



Fred W. Wappat, Inc. 135 Valley St., Mayville, N. Y. (on Chautauqua Lake)

Businessmen Should Demand Economic Solvency,

Says Dr. Edwin G. Nourse

AN ECONOMIC policy of "slipping into deficits as a way of life" is "simply failing to face the realities." Dr. Edwin G. Nourse, former chairman, Council of Economic Advisers, Executive Office of the President, stated in a re-

Speaking before 1200 builders at the Twenty-second Annual Banquet of the Builders Association of Metropolitan Detroit, Dr. Nourse criticized the passage of a budget this current year that promises an additional 5.5 billion-dollar deficit to be added to one of 1.8 billion incurred at the end of 1949.

"In January 1949," Dr. Nourse said, "the President assked for a 4-billion dolar tax increase in order to provide for modest curtailment of the debt. . . But then we came to the spring recession, and the President withdrew that it was sound under the circumstances. Four billion dollars of additional taxation would have complicated the problem of business in making adjustments in that first recession period. I think that action was all right, but the recession period gave way by August to one of very bracing advance

"And what did we do? We proceeded to pass a budget for this current year, that we are now working under, which promises the country another deficit of 5.5 billion dollars."

Such additional deficit would wipe out the savings of the inflationary postwar period, Dr. Nourse stated, "I submit that that is a situation which undermines the solvency of our economy within which you (builders) have to do business, within which businessmen have to make their investment plans, which are the basis of your construction operations. That in my judgment is a very dangerous situation."

While one individual can't do much about this situation Dr. Nourse explained that "the expression of a sober and sound and determined public opinion can change our national financial picture."

He concluded with an encouraging note in regards to the present attitude in Washington, where he said "there is a responsiveness at the present time such as there has not been before." A balanced budget would force some problems into a harder position this year, "and might even give us a year or two of less active and less profitable business and somewhat more unemployment," he stated. "But that is not soo high a price to pay for assuring ourselves and the world that we have the determination and the know-how to put our affairs on a solvent basis.

"Public housekeeping isn't basically different from company housekeeping or from family housekeeping. All prudent men operate on essentially the same principle. Business in this country has habitually gone into debt. It has pushed the country forward because it went into debt when there were special needs of expansion to be met or when there were special emergencies that had to be coped with. But when reputable businessmen go into debt, they do so with a financial plan which is designed to see them through. They office or a bigger plant than the other fellow, and be unconcerned if it leads to bankruptey."

Our public housekeeping, he explained, is not at the present kept according to the principles of good business housekeeping.

Among more than 50 NAHB honor guests at the speakers table were Thomas P. Coogan, NAHB president; Frank W. Cortright, NAHB executive vice president; John Weinhart, president. Detroit Builders Association, and Henry F. Fett, 1949 Detroit association president.



Now masonry wall paint hits a new high in protection thanks to VINYLITE Brand Resins!

A two coat system based on these amazing materials shows exceptional resistance to weather, fresh and salt water, industrial fumes, oil, grease, cleaning solutions and most other chemicals. The plastic coating can be applied to brick, concrete, concrete brick, stucco, concrete block, cinder block or asbestos siding.

It can be applied to damp basement walls or to surfaces previously painted with other materials. It does not craze, check, peel or crack when it has been properly applied, nor does it chalk. Used on homes, apartments or office buildings, this VINYLITE Resin-based paint cuts upkeep costs.

It's particularly practical for factories, smelting plants, breweries and refineries where it withstands the corrosive fumes that eat into ordinary paints. Used as a coating for swimming pools (both in color and white) it has shown excellent resistance to fresh and salt water and disinfectants. In deep basements, the use of these coatings provides dry, clean and attractive walls.

Put this remarkable new paint to work for you! Get the complete story. Write Department HY-64.

Data on "VIETTE" Masoney Point, courtesy The Malaanrock Company, P.O. Box 1951, Gacinosei 1, Obio

BAKELITE DIVISION, Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N.Y.



Here's How to Beautify the Entry

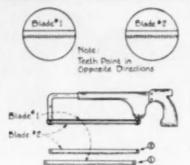
with Coffman's Exquisite CLIMBING VINE DESIGN Ornamental Iron Porch Posts

Graverful hand-wronght Coffmans troin purch pasts imprive the books of any house, offers increasing sales value treasendowsky! Yet these ornamental pasts are quiste interpretaive and are available himograph your humber on building copply dealer. Use Coffman's distinctive No. 130 design for porch, havenevery, or haloungy. All accessionies are parable to easy matallation.

Tested by Pitteburgh Testing Laboratories Careful testing under professional laboratory compoil gives accurate load carrying distilians, proves Collosan hoad carrying factors amazingly high Corners will support 35,000 lbs, fat posts 850 lbs.







Blade #2 laid flat on Blade #1

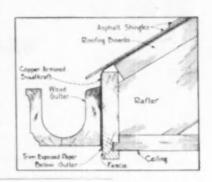
How to Cut Metal Mouldings With a Hack Saw

TO PREVENT blades from breaking when using a back saw in curting thin metal mouldings, bullnose trim or metal casings, proceed as follows:

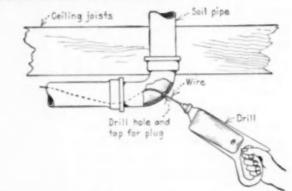
Place two blades in the saw frame at the same time, one against the other, with the teeth of one blade placed in the opposite direction from the other. By this manner the upstroke of the saw cuts the metal as well as the downstroke of the saw; it also eliminates hanging.—Submitted by W. L. Dodds, Branson, Mo.

How to Prevent Root Leaks at Gutter

WHEN roof gutters are covered with ice encrusted snow the heat from the building causes the ice nearest the roof to melt. This water has no place to escape except between the facia and roofing boards. To prevent this lay the first roll of paper (preferably Sisalkraft | on the roof at the eaves, letting the paper extend to the bottom of the facia board. Install gutter on top of the paper, trimming excess paper below the gutter line .- Submitted by Warren I. Valentine, New York City.



Now to Clean Out a Waste Pipe



CLEANING out waste pipe for tub or other fixtures may be done quickly by using the following method. Drill a hole in elbow where it connects with the soil pipe, tapping the hole for a small plug. Insert baling wire into the pipe; attach one end of wire to an electric drill. When drill is turned on the wire whips around inside of pipe cleaning out debris.—C. A. Tendhope, North Girard, Pa.



CABINETS

To carry out the styling of the walls, Monowall can be applied to cabinets, too, It's easy to cement the panels in place. Monovall metal channels finish corners and provide a modern trim for the job.

DOORS

It's practical to use Monowall on doors and drawer fronts. Monowall is simply cemented over old fronts and trimmed with Monowall channels. In new work, an inexponsive plywond backing may be used.





By using Monowall over a simple framework, counters can be custom built to save much-needed space. The counter shown here serves as a table, work surface, and a handy storage place for kitchen utensils.

COUNTERS



Monowall gives your customers ideas

Monowall is the kind of material that sells your customers on the idea of remodeling. When that happens, you sell not just Monowall but the whole remodeling job.

Armstrong's Monowall is a versatile material. It offers customers a practical solution to the problems of repairing old walls and ceilings at a price they can readily afford.

Because it's an easy material to work with-easy to cut, shape, nail, and cement-Monowall may give the customer ideas for other uses, too. In this kitchen, for example, Monowall was used as a facing for cabinets, cupboards, counters, and even drawers. Monowall channels and moldings were used as a decorative trim for joints and edges,

Armstrong's Monowall has a strong appeal to the housewife. Its smooth, lustrous finish is durable and easy to clean. Monowall's attractive colors are completely up to date, all styled to the latest decorating trends by Armstrong's Bureau of Interior Decoration. In all, there are 22 different color and design combinations from which to choose.

If you're not already selling Monowall, get full details and prices from your Armstrong lumber dealer or write to Armstrong Cork Company, 1605 Lincoln St., Lancaster, Pa.



Compact Decign for Yaday's Space Saving Installation Gas at others highline and international states and for low-remembrishing an well as larger homes. Stored or conlevel models. Available in size ranging from 66,000 m is 55,000 Bits input capacities in gas, 57,000 m 155,000 m oil.



Construction for Reanomical Operation, Owner Satisfaction Gas ne oil-ford gravity furnaces, for all types of forwaing, Available in sizes from 63,000 to 155,000

slity Engineering and

Bru input capacities in gas, 90,000 to 135,000 in cil. Unit shown in the new Type 111 Gas-fired gravity furnaco.

First Choice with Leading Architects and Builders

fuel-thrifty Mueller Climatrol

The complete Mueller Climatrol line is the first choice among feading builders and architects for many reasons. First, they know this complete line gives them the heating unit that is right for any job — with any type of heat, any type of fuel. Secondly, they know that they deliver years of Mueller Climatrol's fuel-thrifty comfort — a guarantee of customer satisfaction. Finally, they deliver a heating system whose name has universal acceptance thanks to Mueller's 93 years of leadership in the home heating industry. Write for full details. L. J. Mueller Furnace Co., 2352 W. Oklahoma Ave., Milwaukee 15, Wis.



Catalogs and

HOW-TO-DO-IT INFORMATION

734—PRIZE-WINNING DESIGNS—A report on the Wood Garden-Type apartment design contest, sponsored by the Timber Engineering Co., 1319 Eighteenth St., N.W., Washington, D.C., contains the prize-winning designs that were selected from among nearly 300 entries. representing work of architects and architectural students in 34 states and Canada. Copies available from above firm.

735—PERCUSSION WELDING METHODS— "Technical Advisor, No. 12," issued by Reynolds Metals Co., 2500 So. Third St., Louisville, Ky., discloses percussion welding methods which now make it possible to flash weld aluminum tubing directly to copper, stainless steel, Monel, or other alloys without regard to the dissimilar metals in the joint.

736-NEW DECORATING IDEAS—The largest catalog ever issued by the Sloan-Blabon Corp., 295 Fifth Ave., New York I6, N.Y., is now being offered to company's dealers. Full color reproductions of entire line, including 77 new designs, new decorating ideas and suggestions for doing over kitchens, hallways, bathrooms, utilsy, dining, sewing and hobby rooms are included. Catalog contains 228 pages.

737—COST SAVING TOOL—How one man with 240-pound Wayer Impactor can tamp and finish 45 to 60 square feet of material per minute is told in a new bulletin issued by Wayer Impactor, Inc., 12 N. Third St., Columbus 15, Ohio.

736—"BEFORE YOU BUILD OR BUY"—is the title of an informative easy-to-read booklet offered by Dow Chemical Co., Midland, Mich., that answers three questions faced by architects, contractors and home owners: (1) Is the house built right of right materials to give it a normal life expectancy? (2) Is there reasonable assurance that, in a few years, there will be no prohibitive maintenance costs? And (3) is the house so constructed that it will bring a high resale price?

739—HOW TO MAKE YOUR OWN—double hung and casement sash, trim, including base, shoe, crown and cove mold, window stop; raised panel doors; interior paneling; stair tread nosings; lipped cupboard doors; and drawer fronts is explained in new folders issued by the Boice-Crane Co., 966 Central Ave., Toledo 6. Ohio.

740—DOUBLE HUNG WINDOW WITH FRAME AND SASH—How to install Fleetlite aluminum windows in brick veneer, concrete block, frame or solid masonry construction, is shown with detail drawings in new literature available from Fleet of America, Inc., 110 Pearl St., Buffalo 2, N.Y.

741—COMPLETE LINE OF FLOOR MACHIN-ERY—Illustrations and specifications of a complete line of floor sanders, polishers, scrubbers and other machinery are offered in literature available from Lincoln-Schlueter Floor Machinery Co., 1250 W. Van Buren St., Chicago 7, Illinois.

742—HOLLOW STEEL DOORS—Colorful 4-page bulletin describing the USF hollow steel doors and frames is offered by United Steel Fabricators, Inc., of Wooster, Ohio. Bulletin features door applications typical in six major multiple dwelling projects for which they have been recently selected.

(Continued on page 134)

NOW...

COMPLETELY INVISIBLE PANEL ATTACHMENT PLUS ONE-TRADE APPLICATION WITH THE BEAUTIFUL NEW Mut-Wood LOK-PANELS



It's a big forward step in dry wall finish! Predecorated Nu-Wood LOK-PANELS permit amazingly fast application-completely invisible attachment-employing only one trade! New

speed, economy and beauty result from three exclusive Nu-Wood features—big, predecorated panels with factorymachined interlocking joints, the Nu-Wood Hidden Clip for invisibly attaching the panels to intermediate studs, and the Nu-Wood Clip that fastens the panels to wall framing on tongue and groove edges. Here's why Nu-Wood Lok-Panels can bring you profitable business from satisfied owners...

AN ENTIRELY NEW IDEA IN DRY WALL FINISH



And here's the famous Nu-Wood Clip that lacks the Lak-Panel edges together. The Nu-Wood Clip is reversible, Wileg alther into the graeve or over the tangue of the panel.



NO FURRING STRIPS—FASTER AF-PLICATION—punels applied directly to framing members, either in new construction or axisting reams. Diagram shows No-Wood Hidden Clip being natised to intermediate stred.



BIG PREDECORATED PANELS-32" wide, 8" and 10' long go up quickly. Package of panels can be easily hondied on the job. No paint or other surface finishes needed-mo mess!



TRADE APPLICATION—beautiful shadow-line edge removes the need

for tape, wood strips or other jaint-



ATTACHMENT-no unsightly

nell hands! Disgrem shows Hid

den Clip before and after it is am-



FACTORY-MACHINED INTERLOCK-ING JOINTS-require no further treatment on the job, eliminate "breathing." Tangue and groove joint of the Lak-Penels receives No-Wood revensible clip for a tight joint.

MA" 1950



SELF-ALIGNING SURFACES — with Nu-Wood Clips, irregularities of the noting base do not affect inveltoase —"fluating" wall reatment permits normal mevament of panel and base. Surfaces day lovel. concealors. Diagram shows method of beddod in back of Lab-Panel. driving Lab-Panels on Hiddon Clips.

Sta Lite Mut Wood Kolon Frank

A FRODUCT OF WEYERHARDISER DECORATING + ACOUSTICAL + INSULATING INTERIOR FINISH

WOOD CONVERSION COMPANY Dept. 119-50, First National Bank Bldg.

St. Paul 1, Minn.

133



Catalogs

2

(Continued from page 122).

743—LOUVERED WINDOW UNITS—How a lonvered type window manufactured by this firm keeps winter on and lets summer in is described and illustrated in literature available from Solar Air-Flo, Inc., Elkhart, Ind. Window units described can be installed in any and all kinds of wall construction. Unit is of modular design and comes accembled and ready to place, complete with exterior trim.

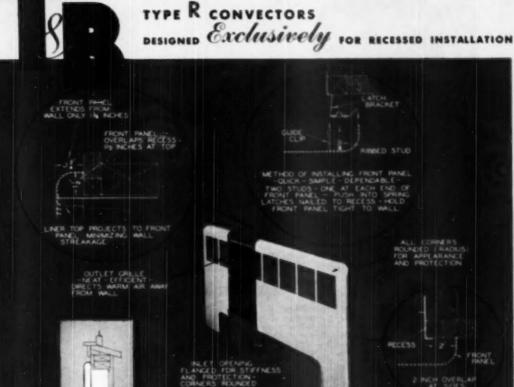
744—INDIVIDUALIZED GARAGE DOOR DE-SIGN—A Crawford Styliat garage door design sheet, available from the Crawford Door Co., 28-041 St. Jean Ave., Detroit 14, Mich., offers builders the opportunity to incorporate their own design ideas on Crawford garage doors. The Crawford Marvel-Lift Stylist door is called "The Garage Door of L000 Faces" by the manufacturers.

745—EQUIPMENT FOR SMALL WOODWORK-ING SHOP—Special cutters for windows, doors, cabinet work and screen doors, and supplies for many small power tools are illustrated and described in a 77-page catalog offered to builders and contractors by the Woodworkers Tool Works, 222-224 S. Jefferson St., Chicago, III. The catalog, No. 105, offers complete information in sizes and specifications.

746—"MOULDINGS BY THE THOUSANDS" is title of a new bulletin issued by Power Tool Division, Rockwell Manufacturing Co., 400 E. Vienna Axe., Milwaukee I. Wis. Up-to-date information on the Delta-Milwaukee line of 3-lip shaper cutters for use on any shaper that has 36-inch spindle is given. Diagrams show how cutters can be combined for various cuts. 747—PORTABLE ELECTRIC TOOL LINE—Tappers, drills, nibblers, screwdrivers, nut setters, hammers, saws, grinders, sanders, polishers, and other Thor tools are described and illustrated in a new 11-page catalog. No. E-2, offered by the Independent Pneumatic Tool Co., Aurora, III.

748—PORTABLE WOODWORKING MA-CHINES—Bulletin No. 1 issued by J. D. Wallace and Co. 134 S. California Ave., Chicago 12, Ill., illustrates and gives performance data on No. 1 radial saw with shop table and roller extensions. How-to-use information and specifications are included.

SERVICE COUPON—CLIP and MAIL to CHICAGO Readers Service Department American Builder, 79 W. Manree St., Chicago 3, III. Ploase send me additional information on the following product itema, or the catalogs, listed in this department. Numbers Name Street City City State OCCUPATION® * Please near that ecropolism must be stated if full service is to be given. AMERICAN BUILDER



• Spearance plus the space-saving feature of recessed convectors are important homeowner appeals. However, if ordinary cabinet type convectors are recessed, there is a good possibility that sooner or later, the wall plaster around the unit will crack and mar an otherwise satisfactory job.

Exclusively designed for recessed installation, Tuttle & Bailey Type R Convectors solve this problem. Constructed with a front panel that extends beyond edges of the recess, sufficient overlap is provided to cover the wall plaster line . . . and your customer is sure of a permanently neat, trim installation.

ASK YOUR JOBBER

TYPE S

wall hung

CONVICTORS

Designed for commercial, institutional,

and industrial instal.

lations. Send for

Bulletin 500.

NEW BRITAIN, CONNECTICUT



"You bet! I'm putting Master No-Deaft Sash Balances like this in every window. They give the windows smooth metal tracks to run on, and their counter-balancing springs make windows easy to raise and lower. Think what a selling point this gives ne. Ine: windows that always work right ... , windows with no ropes to break, no pulleys to rust. But that isn't all? These Master No-Draft Sash Balances weatherstrip the windows, too. That means they keep out dust, dirt, wind and water . . and cold, besides. What's more, they cost less to install, because they don't need pulleys, cords, weights or box-frames. And

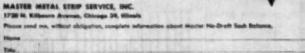
MASTER NO-DRAFT SASH BALANCES ARE PRE-CISION MADE of the finest, highly-tempered non-corrosive metal. They can't rust. Springs are correctly-tensioned to give perfect balance of the upper and lower sash and easy. fingertip operation. These sash balances are made in a factory that's recognized by the industry as outstanding for its efficiency and the craftsmanship of its workers.

SMOOTH OPERATION IS ASSURED by Master No-Draft Sash Balances, because they automatically adjust for shrinkage and expansion in the wood. Runways are completely metalcovered and require no painting (Of course, cross-members should be installed). Double contact prevents rattle when

datasi Mis

USED BY THE U.S. GOVERN-MENT AND PROMINENT BUILDERS all over the country, Master No-Draft Sash Balances are tested to mechanical perfection. They make windows neat and weathertight and there's nothing to cause trouble. You can forget maintenance!

See Our Catalog in Sweet's Ma



NEW PRODUCTS

(Continued from page 64)

ADJUSTABLE TRUCK MIXER A853003

Ers subwitable discharge Mata-Mixer can be slovated to a maximum height approximately ropul to any high discharge type of mixer, or



alavated to any inte mediate point in the hoist range. Makes for greater flexibility in getting concrete into Jorna. Rex chain drum drive Monten steel drum and blades, and enclosed water system. Fluid drive for smooth specifion. Chain Belt Co., Dept A8, 1600 W. Bruce St., Milwaukee 4. Wis

SIX-INCH JOINTER A853008

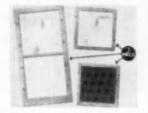
New H & A &-och jounter compliants of relificating separate with a 40-meth by 8-meth table and a 37-meth fence for planing and miging Ribbed fence can be tilted to 45



degrees in the vertical plane and 7 degrees in National place. The latter permits shearing cuts in wood where grain tends to lift in andnory cuts. Hendwheels specifie hant nod tentoble heights and depth of cat, and are or any reach han the hast of machine, etc., asting Bending to stooping. These suffer knows we cale to speech of better than 6,100 RPst. Ail moving parts enclosed. Hestor & Anderson, Dept AB Paufeld town

COMBINATION WINDOW A#55031

Jilly, is new wooden to dow with screen insert of bronze mesh, has a self-poring feature. Changed from screen to



storm in a few minutes with an ordinary house hold sprew driver from maide the House. Mode of clear pine, tracked with special preservative. sealing wood against mainture. Smanth satin finish ready for pointing to motch window frome Angel Novelty Co., Dept All 340 Broad Encloying, Man

(Continued on page 138)

AMERICAN BUILDER

Address

On

kwikset LOEKSETS MEMORANDUM TO Builders: More and more builders are installing more and more Knikset Locks. you save money when you buy them ... save time when you install them ! DISTRIBUTOR MANUFACTUREDBY Feature For Feature NC. Dollar For Dollar 1107 East Eighth Street Los Angeles 21, Colifornia You Can't Beat Kwikset!

How to make provision for attic fans in your homes

new homes so that they can be for inexpensive installation of made comfortable throughout package attic fans, the most hot summer months. The two economical and practical means steps described below will save of cooling an entire house.

It is a simple matter to plan money for owners by providing



This new fan is a compact unit, with built-in fan, motor and suction box. Fits low-clearance attics. Certified air delivery ratings for any size home or climate.



Automatic or pull chain shutters are quiet, tight-closing. Fit narrow hallways. Soft ivory finish (baked enamel) harmonizes with the color scheme of any room.

MAIL FOR COMPLETE CONSTRUCTION DETAILS

Hunter Fan and Ventilating Company, 381 S. Front St., Memphis 2, Tenn. Send copy of "How to Cool for Comfort" to:

Name

Address

City & State_

Firm.

Hunter Package Attic Fans 138

NEW PRODUCTS

TREE MOVER

(Continued from page 136)

A\$55001

Continental tree mover handles trees with 50inch diameter balls. Three-wheel suspension of mover affords mobility to reach mees easily,



and to plant them in difficult places without injury to lawn or other plantings. Unit straddles hale, or can be backed up to it for direct life. ing or lowering of trees Rear wheels adjustable for hillside stability. The DoAll Co., Dept. A8, Des Ploines, Ul.

ALUMINUM WINDOW A855025 aluminum window has extra Master Lupton deep sections, welded construction, and pre-cision weathering. Designed especially for schools, hospitals and office buildings, win-



dows can be glazed inside as outside. Windows will accommodate glass up to 1/2 inch thickness All hardware is made of aluminum. Screens of sluminum are also svailable Michael Flynn Manufacturing Ca., Dept. A8, 700 E. Godfrey Ave., Philadelphia 20, Po.

BENDING DEVICE A855038

Tal Hundy Bendy instantly makes uniform bends in any desired degree, including affsets in $\frac{1}{2}$ and $\frac{1}{2}$ inch rigid. EMT this wall at aluminum conduit. No special adjustments necessary. It has a measuring gauge and bend degree indi-



cator to control precision bends made by in experienced workmen on the job. Recommended for use in open or slab work, or any other job where small or large numbers of bends are reavired. Operates easily, without special knowlsurren. Operates easity, without special knowi-edge. Mode from lightweight metal, yet a strang and rigidly constructed. Weight, 30 pounds. Tal Bender, Inc., Dept. AB, 417 N. Water St., Milwaukee 2, Wa.

(Continued on page 140)

...of course, it's electric!



· Easily Installed

- * Eliminatus Garbage Mess
- Double-Edged Shredders and Reversing Switch for Long Life



Here's Electric Kitchen Efficiency in Only 60 INCHES of Wall Space

Here's how to conserve space ... or provide more room for family living in small homes, apartments or cottages. Ideal for use in remodeling of single dwellings into multiple-family units.

The Westinghouse Electric Range provides ample cooking capacity. The Under-Counter Refrigerator provides 8 square feet of refrigerated shelf area. The sink bowl and drainboard are stainless steel. Can be equipped with the added convenience of a Westinghouse Waste-Away Electric Garbage Disposer. Two 30-inch steel wall cabinets complete the unit. It's a marvel of efficiency that will win the approval of your customers or tenants.

WESTINGHOUSE ELECTRIC CORPORATION

Appliance Division

Plants in 25 Cities-Offices Everywhere



- . Three 5-heat "COROX" Units
- * Electric Appliance Unit
- . Extra-Large, True-Temp Oven
- * Fibergles Insulated



- · Reversible Door
- All-Steel Construction
- Economizer Mechanism
- 5-Year Protection Plan

YOU CAN BE SURE .. IF IT'S Westinghouse

Mansfield, Ohio



Make the toughest job easy with Stanley-Carter Lock Mortiser





J4A Power Plane, % h.p., with cutter grinding attachment and banch bracket for converting to bench jointer

STANLEY

Machine perfect lock mortises made as easily and simply as a saw cut. Every mortise perfectly centered. Height rods and self-centering clamps cut down time from door to door. Less than a minute to change adjustments for different size locks. Average time per mortise only a minute . . . up to 400 doors a day. Simple ratchet device gives automatic feed. Full horsepower motor. Mortiser weighs only 26 ½ lbs., lightest, sturdiest lock mortiser on the market.



This trade mark on electric tools tells you the most important thing you want to know about tools

When you buy an electric tool you have to take somebody's word about gears, motor, bearings, shaft, switches, power, etc. Whose word about tools could be more reliable than the word of "Stanley" . . . tool makers for over 100 years. On electric tools the name, Stanley, means that the tools are quality built, thoroughly tested and honestly rated. Covered by a generous guarantee and serviced by a network of Stanley Service Stations. See your industrial distributor or write for complete catalog. Stanley Electric Tools, 492 Myrtle St., New Britain, Connecticut.

ELECTRIC TOOLS . STEEL STRAPPING . STEEL

HARDWARE . TOOLS

NEW PRODUCTS

(Continued from page 138)

SWING LOADER

A855016

Compart 180-degree reing loader, of Ya-part importy, a operated by four simple hydroalic spinders which haid and lower, using to right ar left, and open and class its bucket. Swinging



boom permits loading fram 9-faot wide swath, and dumping into tracks without backing, typing a maneuvering at the machine. Can work in space 15 lest wide. Bucket clearance is 8 feet 2 mitters No gees shifting needed to raverse. Traction speeds from 1½ to 15 M.P.H. Model 58 The Mande Manufacturing Ca., Dept. A8, Columbus 8, Chiu-

STAIR GAUGE

A855027

Elisson stall gouge enables contractor or companter in 10 seconds to measure both correct length and and angles for start mends, risers, shelves for closers, supboards, bookcases and



sill other inside metaviaments Boards are then marked and cat for perfect fit. Easily edjustable to any length hom 10 inclus up, and each end prote and locks at any angle. Skin boards for fauritass can be juit find and put in place without need for Atting them caucially then treads and rears as measured, cut and priced between skirt boards. Elision Teol Co., Depr. AB, 2119 E. Sath St., Minneepola 17, Minn.

GRADER ACCESSIONY AB55006 Accessory unit to intrease utility of Model D Allis Chalmers grader is on hydraulically controlled Windraw Eliminates On shoulder maintenance jobs, this accessory clears of ex-



cess material which grader moldbaard usually pries up along the road's edge. Reconditions road shouldes: in one pous, eliminating geter trips. Eliminator roles on its seen wheels. Blade artilings are not affected by up and down move ment of grader. Easily mounted on grader have by four heavy balts and rea 1/y-with prins. Fractamotive Carp., Dept. AB, Deerfield, III

(Continued on page 142)

"The finest constructive selling service ever produced for the building industry..." that's what hundreds of leading retail lumber deelers, and others in the small home merchandising field are saying about the great new book, "Planning Your Individual Home", just published by the National PlanService, Inc., 1315 West Congress Street, Chicago. This book, of ninety-six playing-card-thickness pages, 15°x 20° in size, printed in full color, is a comprehensive new home presentation without parallel. Write to your own Association Secretary or to the National Plan Service, Inc. Start this book working for you!

ing for you! Working for you, too, is the famous Certigrade Label, found under the bandstick of every bundle of shingles produced by the scores of outstanding Shingle Manufacturers who compose the Red Cedar Shingle Bureau. "Certigrade Shingles", all qualityinspected and guaranteed up to grade, can be sold by you with the assurance that they will bring repest business. Use the new National Plan Service book to sell new shingle homes. Insist on the Certigrade Label and keep it—Working for You! A LABEL SIMILAR TO THIS, DESIGNATING GRADE AS NO. 1 BLUE LABEL RED LABEL OF NO. 3 BLACK LABEL IS ATTACHED TO ALL CERTIGRADE SHINGLES RED CEDAR SHINGLE BUREAU

GRADES

0



orking for you...

"There's extra sell-power in that FOLLANSBEE terne metal roof!"

. IT LASTS A LIFETIME

IT FITS INTO BUDGET HOUSING

. IT BELONGS IN ANY DESIGN OR COLOR SCHEME

Buyers have confidence in Follansbee Terne

Metal Roofing because they know it will last a

lifetime. Yet it's never out of style because it can be painted to match, or contrast with,

building trim.

These Follansbee Terne Metal Roofing features increase the sell-power of modern homes by increasing the pulling-power on homebuyers. They're the features you can incorporate in housing of all classes because Follansbee Seamless Terne Roofing is moderately priced.

More and more home buyers will be asking about Follansbee Terne Roofing. To help you

answer their questions we've prepared a little booklet entitled "Beautiful Lasting Roofs of

Follansbee Terne". Send for a copy, today.

FOLLANSBEE STEEL CORPORATION

GENERAL OFFICES, PITTSBURGH 30, PA. COLD ROLLIS STAIP - ELECTRICAL MARTS - POLISMED BLUE SMEETS SEAMALISS TEAM ROLL BOOMING

BARNEDS TERME FOLK ROOTING Safes Officer-New York, Philadelphila, Rachester, Cleveland, Detroit, Milwauker Safes Agentr-Chirage, Indianajolis, St. Louis, Kannar City, Nashville, Houston, Los Angeles, Nas Practices, Seattler, Toronto and Montreal, Canada. Finary – Oulandber, W.S.

Fallensboo Botal Warohauses Fittuburgh, Pa., Roshestor, N. T., and Pairfield, Com.



(Continued frim page 140)

TRIPLE-ACTION MURIN ABS5013 Deluxe Wonder Hos-Type mixer, for use in montor, plaster and contrete products work, has 6-cubic-foot respectly and features. Wiple hos mixing action. Sealed his end lack shaft beer



ings, renewable blodes, telescoping axle and adjustable scroper blodes Available with caster-type wheels, which cut over all width to 31 inches to permit partability when doing inside work. Can be equipped with special grading and bag-splitter. Construction Machinery Co., (Dept 40), Bas 120, Waterlao, Jowa.

WATER SOFTENER

A855035

Cul-Matic zeulite water softener combines features of a permanently installed, home avened appliance with service features of the netionwide Culligan Soft Water Service plan. Pub-



button control reduces regeneration of the unit to a few minutes personal attention. Ingenious value automatically salts, rinaes and returns the softener to service. Automatic drain device refills the appliance with water, eliminating spillage. Cultigan zealite Co., Dept. AB, Northbroak, III.

POWER WHEELBARROW AB55017 Mato-Bug, 1950 model, has large steering wheel



with 4 to 1 gear ratio. Rated hopper capacity is 10 cubic feet, or 1,200 pounds on plantform body. Powered by standard 4 H.P. gasoline engine, and travels at speeds of 10, to 4 M.P.H., forward and reverse. Rwik-Mile Ce., Dept. 48, Port Washington, Wis. (Continued in page144)

AMERICAN BUILDER

A-THEY





Only Delta Multiplex — with exclusive Double Radial Action—has safety built in to protect you in all these ways!

10. No other saw
 has these
 2 fully-usable 360° radial
 movements above the table!

Elevering handle to right ng front - you creak



 Motor start step with is simary basely -- fight at your dispertipe. All levers, horder, degree i wralios are also up fyrest — put set up faster.



otomatic safety guard pBy encioes on Adorable kickback with pitter. lan wurks frim me utde foure --- unfritig diuste from aarren to

Only Delta Multiplex gives you all these safety features at no extra cost!

Makes profits an every cut from collar to root. Often pays for itself an one job

Learn more about Delta Multiplex these 3 ways:



FREE DEMONSTRATION! Ask your dealer to demonstrate Delta Multiplex in action.

REE IDEA BOOK! 28 Delts Multiples. coupon for your on

iend no new Della N	utiples cetals	ış, "Valis	alled Appli	callens"
fame			1	
160		-		
Company	-			
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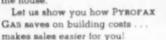


Put into your houses what home "shoppers" want ... and they'll buy!

Two out of three women prefer gas for cooking. Beyond the mains, this means PYROFAX Gas not only for cooking, but for refrigeration and water heating as well. It's the cleaner, faster, more economical, more dependable fuel... gives instant, even heat.

No matter where you build, you can install PYROFAX GAS . . . the

low cost fuel for modern kitchens. Installation is quick and easy ... no expensive wiring, no construction changes. PYROFAX Gas is piped in direct to range, refrigerator or water heater from twin cylinders outside the house.





Nationally Advertised Appliances

Magic Chef and Caloric ranges, Servel refrigerators, Ruud and Bryant water heaters, and other gas appliances are available for use with PYROFAX Gas—from distributors in 30 states east of the Rockies.



For full information see SWEET'S CATALOG, or address Dept. All. PYROFAX GAS DIVISION Union Carbide and Carbon Corporation

30 East 42nd St. If New York 17. N. Y. "Pyrolax" is a registered trade mark of Union Carbide and Carbon Corporation.

NEW PRODUCTS

(Continued from page 142)

FLOOR MAINTENANCE MACHINE

New improved American DeLuse floor maintensive machine, designed for dry or wet cleaning and maintensince aperations on a great variety of floors, is offered in a new range of



sizes, including 14 and 16 inch brush spread. Rotabed situmisum costings throughout. Adisstable houses can be easily set at any desired angle through full 90 degree swing. Handle can also be puickly detached for staring or transgening. American Floor Surfacing Machine Ca., Dept. AB, 511 South SP. Char Street, Taledo 3, Ohio.

OUTDOOR RUBHISH BURNER AB35026 Model 20, ourdoor rubbish berner, is designed to source that waste contents are completely fixed. Weather-resistent outer cosing is of heavy galvanized steel. Grate basket of electrically walded their rods hongs on hooks mide. Surrounding space is ample for free circulation of oir current individe by the vents in cosing. Basket holds new bushels of trash. Topered smake holds can be grate hosket opening. The Majastic Co., Dept. AB, 300-A Erie Sr., Huminghon, Ind.

BAS WATER HEATER LINE AB53030 Meaters are fully automatic, underfired, canter flug units, with snap action thermastatic controls and 100 per cent automatic sofety pilot and shut-off safety valve. Entro heavy, hat dip gal



vanuted, cupper bearing sheet tanks one tested line 355 pounds pressure and 150 pounds working pressure. Completely blanket insulated. Cathodis protection by replaceable magnetium anade to extend tank life is optional. Offered in 20, 30 and 40-gallion copocities. L. O. Keven & Biother, Inc., Dept. A8, 154 Option Are., Jerrey City, 7, N. J.

(Continued on page 146)

AMERICAN BUILDER

2.1





Window shopping stops here...

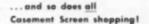
The most intensive of all "window shopping" - that of the architect and builder-must stop at the

REYNOLDS ALUMIN

sight of Reynolds Aluminum Casements. Their superiority in design and especially in *finish* is outstanding. Their flash-welded corners assure maximum rigidity and weathertightness. Their roto-operation is smooth and dependable. And of course they have the basic advantages exclusive to aluminum windows: rustproof permanence with no need for protective painting. narrow frames of neutral tone to harmonize with any concept.

Reynolds supplies residential casement, fixed and picture windows in all combinations, standard and western types... also Reynolds Aluminum Screens to fit these and all metal casement windows. Stop right here and write for complete descriptive

literature in A.I.A. file form Reynolds Metals Company, Building Products Section, 2003 South Ninth Street, Louisville 1, Ky.



Reynolds Aluminum Screens fit not only Reynolds. Windows but all Aluminum and Steel Casements, Exclusive corner lock feature assures great rigidity and high spring tension to keep the cloth tight. Where you are buying new windows, specify Reynolds Aluminum Windows complete with Screens. Where you must screen other casements, do it with Reynolds Aluminum Screens. See your dealer!

REYNOLDS ALUMINUM RESIDENTIAL CASEMENT FIXED AND PICTURE WINDOWS

MAY 1950



Wherever a corner type shower is specified the Fiat Cadet Model 21 is a perfect natural for the job, much lower in cost than any built-up type corner shower. The graceful lines of the Corner Cadet blend smoothly into the bahroom walls to give the effect of a custom built installation. Its beauty is in harmony with the finest bahroom fixtures.

The Fiat Dolphin or Zephyr glass door is available for the corner Cadet and adds materially to the appearance and utility of the shower installation.

The usual Fiat high quality of construction and materials are used throughout. Bonderized galvanized steel walls finished in white baked-on synthetic enamel. Special colors available on order. No exposed screws give a smooth sanitary interior. Overall size 36" x 36" x 80".

The corner Cader is one of our most popular shower models. Use compon for catalog of complete line of Fiat showers.

	THREE COMPLETE MANUFACTURING PLANTS (Chicago area plant) Franklin Park, III.,
	Long Island City 1, N. Y. Las Angeles 33, Calif.
In Landers Fiel show	cers are made by Parcelain and Motal Products, Ltd., Orillia, Ontaria
Mease send satalog o	f Fiat Showers, Receptors and Doors.
AME	the second and second
OMPANY	
TREET	

NEW PRODUCTS

(Continued from page 164)

TWO-DRUM BELT SANDER ABS5014 Tendersm beit sonder son be used en alt seeds, metris and plettarks. Weight 8/1, poweds, Beit sanding area is 3651; methes with replacement bain available for all types of material. Spring fersioning dress warrass size



bells, how 3x23%, inches up to 3x24%, inches, available for use. Fluck right ade of nool makes it ideal for issuedrog in convex and against upright objects. Boll and self-lubricating branze sleeve bearings. Pedestal stand is available to zervert belt sunder to a hear's used. In this pasition, and can be used for sharpening chiefs and knives. Mail Tool Co., Dept AB, 7717 S. Chicogo Ave., Chicogo 19, III.

FUG AND SHOWLE FIXTURE ABSS033 Given Mary Adjusto tab and shown fistures affer area of installation and accessibility of exposed fatures and appearance of concerted fastures and appearance of concerted fastures and appearance of concerted fastures and appearance of concerted brass visites with adjusta arm and showen head flumher ranghs in % and 1.7.5 insplations and anoth centers, about 30 indee obsers top of tub. Na danger of damage or theft Milleaukee flush Vatve Co., Dept. AB, 201 E. Rissivour Are, Milleaukee, Wil.

GRAVITY GAS FURNACES AB53029 Model No. C4F700-P05 hes input copacity of 90,-000 8 7.4U's and cosing width of 27 inches, depth of 27 inches and height of 48 inches, Model No. C4F700-1205 hes input copacity of 120,000 81.1U's, rasing width of 29 inches, depth of 29 inches, and height of 56 inches.



Festures of these units include all steel, permonently gus tight uperhastics chamber and heat exclusings and call ion barries designed with 312 diffect ters to provide togened, contike forme of exceptional burning qualities and quark operations. Fully approved by AGA for natural, manufectured and mixed gates. Cominterim subsystict, Naruge Heat Div, Daga AB, Borg Warner Carp., 6/2 E. Wandbridge St., Detroit 26, Mich.

(Continued on page 148).

AMERICAN BUILDER

144

In a full-page ad over its own signature...Washington Post, March 5th...the management of Shirley-Duke Apartments stated:

"Like every item selected for these lovely apartment houses, we, the builders, spent considerable time in deciding on the make of refrigeration that would give our tenants the best in this type of home appliance which plays such an important role in their daily lives.

"The choice - NORGE.

"Norge is a symbol of the hightype construction, workmanship and material that have gone into this ideally located development in nearby Alexandria, Virginia."

And so say more and more builders and developers throughout America — the kind that make the trends and look forward to protected investments. There's a Norge to fit every need. Send coupon for full details.



SEE THE FEATURES OF AMERICA'S FINEST HOME APPLIANCES

REFRIGERATORS + SPACE HEATERS + AUTOMATIC WASHERS GAS AND ELECTRIC RANGES + ELECTRIC WATER HEATERS MAY 1950 SERVING WAININGTON, D. C.-The Shirley-Duke garden apartments for 2,106 families in Alexandria, Va., will tent at \$59.73 for one-bedroom units and \$72.50 for two-bedroom. Road why its builders selected NORGE Refrigerstors.

NORGE REFRIGERATORS Selected for Trail-Blazing Low-Cost Housing!

NORGE Division, Barg-Warner Corporation Dept. A8-550, Detroit 26, Michigan Att: Director of Contract Sales

Sand me more information on the following oppliances

Religensi	ers .
Automotic	Washe
 Barble Ba	

No

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	Ges Banges
	Home Heaters

nd	Title
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147

It's the **RIGHT ANGLE** for Tough Spots...Faster Jobs

OU'LL be amazed at the cost-cutting. Y time-saving and accurate performance

- in both construction, and plant main-

tenance - of this remarkable new Tri-

Speed HOLE SHOOTER with its 2-speed

Right-Angle Drive" attachment, See

This tool not only speeds up work in

the tightest corners, but also provides the

right speeds for boring with bits of every

size, including expansive bits and holesaws. Pays for itself on a couple of jobs. Also suitable for drilling in steel, and con-

See Your Distributor If he cannot supply you, write us and mention his name. Immediate delivery,

MILWAUKEE ELECTRIC TOOL CORP. \$356 West State Street, Milwaukee 8, Wisconsin

complete kit below.

crete with carbide tip drills.

You'll buy if You'll Try?





Milwaukee TRI-SPEED Kit for Contractors . . .

5.412 19" HOLE SHOOTER, hall and infler bearing equipped . Jorah's geared Chuck 450 R.P.M.

2 "Two Sused "Right Angle Drive attachment law side 300 R.P.M. high side 675 R.P.M.

3 3 sescial hits for hor 112" and 2%s'.

A Seecial erench for attach ing and adjusting "Eigh Angle Drive" and Chuck. Reght

148

\$)70

Adjustable "Long Arm" \$24.50 EXTRA

Milwaukee OUALITY TOOLS

NEW PRODUCTS

(Continued from page 146)

WOODWORKING MACHINES A855004 woodworking muchine has sastire basis and steel frame Matar, wee-belt drive and lower wheel are enclosed by pressed steel suvering which is insulated by rubber bending



The 24+24 sch table is supported on double transions, and tilts 45 degrees right and 17 degrees left. Hinged table section permits easy removal of blade without twisting. Top guide a counter belonced. Bearings are lubriceted for The For willwork and Light prediction plants Yates American Machine Co., Dept. A8, Belait w.,

ONE-PIECE GARAGE DOOR A#55072 knee-action one-piece garage door stuys antirally within the building in up position



have unide without steeping. Jugging, or crowing over the first to install, and the costly forming is needed. All metal parts are heavy duty Essential Products Carp., Dept. AB, Little Chute, Will

General Electric's 'Birth of A Salesman' Visited 45 Cities

The Birth of a Sale-man," a fullscale stage production dramatizing the problems of appliance dealers and salesmen, has been presented by the General Electric Co, to its representatives throughout the country. Three troupes recently completed tours and approximately 30,000 persons saw the

The show was professionally written and produced; and the east was male up of stage, screen and radio performers. Total cost of all the productions was more than \$5(8) (88).



In the Weyerhaeuser 4-Square Home Building Service there are scores of modern homes ... each the work of an able architect specializing in small home design.

Sixteen of these designs, according to the blueprint orders we have received, have proved of outstanding popularity. They repeat again and again. One is illustrated above.

A "Best Seller" is a good home to build and feature, because it has basic appeal that attracts more home buyers... makes more sales.

These 4-Square homes offer other advantages

they are engineered for fast, accurate construction ... for the use of standard sizes of ready-to-use 4-Square Lamber which go into construction without needless sawing, fitting or material waste. Other standard, mass-produced materials are specified to take every cost-saving advantage.

It will pay you to see your 4-Square Lumber Dealer . . . see all the designs in this Building Service . . . complete blueprints, material lists and easy estimating forms are available for each design. You will like these designs. You will see in them great values for you as a builder, and for your prospects as home owners.

4-SQUARE LUMBER AND SERVICES

WEYERHAEUSER SALES COMPANY, ST. PAUL 1, MINN.





old building you'll have no fastening problems if you use Paine Spring Wing Toggle Bolts. Spring Wing Toggle Bolts provide a secure and permanent fastening in hullow walls and ceilings and other hollow spots where it is impossible to reach the other side. They may be used in wood, gypsum, marble, lath and plaster, tile and sheet rock. They are especially useful for installing heavy shelves, partitions, wall mirrors, lights, and plumbing fixtures.

For the big user, try Paine's Toggle Bolt Clamp that grips the bolt when it is to be tightened, so it can be tightened with a screwdriver. It cuts installation time in half and saves the mechanic's fingers. Get Paine Toggle Bolts from your supplier today.







Just deill a hole. Li horew wing. Put be through item to be for insted. Thread wing be on holt. Purch win through hole.

be wing springs open then through hole. Pull a hole while eightening a prevent wing turning. When hanging objects that must be moved periodically, use a nut and washes as shown above.



More Power For You . . .

(Continued from page 118)

the introduction of power tools.

Not so long ago. I visited a lumber yard in a rural community where the retail lumber dealer had what amounted to a monopoly on the hogfeeder business of a large trading area. Several years ago a farmer had asked the lumber dealer to build him a hogfeeder to certain specifications. The ioh had been done by the lumber dealer's foreman, who happened to be a handy man with tools. A few days later the farmer's neighbor appeared in the yard and asked the lumber dealer to duplicate the feeder with certain changes which he regarded as minor improvements. As time went on, the changes became more and more infrequent due to the fact that no one seemed to be able to think up any more improvements. Naturally, the end result of this evolutionary development of a hog-feeder turned out to be something rather important to the community. Farmers soon found out where they could get a feeder that would meet their needs-a feeder that would perform satisfactorily for the owner and even for the hogs them-

But that, of course, was not the only important factor involved in this sumewhat simple example which is intended to illustrate what power equipment means to all parties concerned.

It wasn't very long before the handy-man in the humber yard began to tosi odds and ends and pieces of broken boards into what be called the "hog-feeder pile." Come a rainy day, he would then cut these pieces up into parts. Then, in his spare time he would put the precut parts together and lo and behold, there was a bogfeeder—tops in quality and in its functional performance and exceedingly economical insofar as price was concerned.

The coming of power equipment made the construction of the hog-feeder an exceedingly simple and pleasant operation for the handy-man. The parts were made rapidly and accurately in spare time. Pieces of boards and 2x4s formerly regarded as waste were now utilized to construct a highly important piece of farm equipment.

It may seem a bit far-fetched to use a hog-feeder as a bright and shining example of what power equipment means to the light construction industry. A hog-feeder seems to present few problems so far as its construction is concerned. On the other hand, it is made up of a surprisingly large

(Continued on page 152)

Bradley STRAIGHT Hardwood Flooring



Gives you the

edge on competition

because .



Strips match perfectly from end to end.

2 No crook, no forcing, no nailedin tension.

3 Faster laying . . . lower labor cost . . . more profit.

4 Owner enthusiasm for a lasting, superior floor.

These advantages explain the loyalty to Bradley Straight-line by a nationwide host of contractors, floor layers and builders. If you don't belong to this group now, your first Bradley installation will put you in . . . for keeps.



Produced in Oak, Beech and Pecan, finished and unfinished. Bradley also monufactures Oak Plank Flooring, finished and unfinished.

Local Distributors Everywhere.

Bradley Lumber Company of Arkansas WARREN, ARKANSAS





Write Dept A-5

Factory Representatives:

Baltimais, Md Belmant Marr Baine Idaha Osicega, 11 Calumbus, On Des Maines, lawy

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San Rolaal

California

More Power For You

(Continued from page 150)

number of parts, each and every one of which has to be cut accurately. The fact that it is now a simple matter for anyone in the lumber yard to do this work easily and to make each and every part alike is the answer to good construction at lower cost, for the very good reason that it can be achieved through the utilization of what might otherwise he a waste, or even through the use of lower grade materials. Power tools enable the workman to quickly eliminate defects and to produce parts with which economical efficient end results can be achieved.

Then, of course, the coming of power tools opened up a vast field for hobbyists. It turned many a basement into a hobby shop. It created an avocation for many a business man that took his mind off his troubles in the evening and kept him busily engaged in making things out of wood until he became so tired late in the evening that he had no trouble whatever in falling off into a sound slumber.

It is not possible today to estimate how many people are busily engaged in making things simply because it has become easier to do it than if it was necessary to do the cutting by hand. Furthermore, it is equally impossible to estimate the effect of this widespread interest in construction. Magazines devote page after page to the subject. Mail order houses not only use much valuable space in their ratalogs to advertise power equipment for the hobbwists, but publish manuals to show what can be done with the many power tools that are available. Same way with hardware stores and even with lumber vards.

It perhaps is an overstatement to claim that the coming of power tools has brought about the same change in construction as the internal combustion engine has brought to transportation However, it can be stated without fear of contradiction that power tools have changed the construction industry from a hand-tool operation on the building site into something that is closely akin to the efficiencies which are achieved in factory production

That is why I maintain steadfastly. that nothing could have been more important in a day and age when new buildings are so greatly in demand and all of the structures on the face of the earth now need modernization and repair That, of course, constitutes a whale of a big job and it will take everything that the power equipment people have to offer to satisfy the construction needs of the "land of the free and the home of the brave."



EXAS architect

Milton A. Ryan has used Sargent Integralocks and the 4500 line in his own house. (Hardware supplier: Dumas Hardware Company, San Antonio, Texas.)

INTEGRALOCK GIVES YOU ...

becaty - round or aquare roses, sleek knobs to complement the beauty of any decor..., finishes of sturdy brass, bronze, chromium or aluminum.

willing - eleven locking functions, keyhole in knob.

socurity - five- or sis-pin cylinder lock, equipped with a shear-pin safety device in knob.

service - maintenance sero . . . esaled, all-brass and uteel machanism for generations of service . . . 50% smaller lock case for quick mortise and assembly.



WHEN John Q. Public and his wife inspect a house, most of the operating parts are either hidden or not in use. But not the hardware. They can see the hardware. They can feel it and use it. It's the one thing they can "try out." That's why a house equipped with Sargent Integralocks and the 4500 line is well on its way to being sold — and at a quality price. For the public knows and honors the name of Sargent. When they see that your house is equipped with Sargent locks, they automatically think "quality" and identify the rest of your house with that idea. Sargent locks are the best salesmen you can buy.

L. Low

And they can be installed in one-fourth the time it takes to install ordinary locks. Yes, you pay far less for a lock that is the equal in quality to the finest in pre-war locks—and then you save on labor, tool

Write us for the name of your nearest Sargent distributor. He will be glad to sapply you with further information about these two fine locks.

Sargent and Company 45 WATER STREET NEW HAVEN, CONNECTICUT



... a bored-in lock designed to harmonize with any interior decor, yet extremely simple to install, sturdy and practical in use.

ALGAN MY AN

TO THE BUILDER WHO PLANS TO SELL UP **TO 100 HOMES IN 1950!**



When You Include WASTE KING Pulverators

America's Finest Garbage Disposer!

Wherever Builders are making sales history, you'll find their kitchens equipped with the automatic WASTE KING PULVERATOR This one outstanding feature in the kitchen can influence and close the sale faster for YOU, as it has for hundreds of builders in recent

months. Best of all-the WASTE KING PULVERATOR offers the greatest value for the least amount of money. *Upgrades the home far beyond its value, as much as ten percent. Think it over! What other quality feature could you offer at such a low cost?

Edinte



1800 WASTE KINGS INSTALLED IN BIGGEST GARBAGE-FREE COMMUNITY IN U.S. A

COMPARE! Improved shredding sleeve makes WASTE KING PULVERATOR the most efficient garbage disposer in the world! Requires less servicing than any other garbage disposer known. Let us prove it to you!

FREE! Garbage Disposer A.I.A. file folder sets. Fill out coupon now! MAIL TODAY!



© GIVEN MPG. CO., Los Angeles 1950



at 50 Years' Heating Prograss Summarized **By Industry Bureau**

The last 50 years have been the most eventful in the entire evolution of the heating industry since the cave man built his first fire, according to the Plumbing and Heating Industries Bureau.

Some of the most significant innovations in the heating industry, such as radiant heating, solar heating, and heating with the latent heat of the earth have taken place in the last 10 years, the bureau pointed out in a summary of 20th century industry progress.

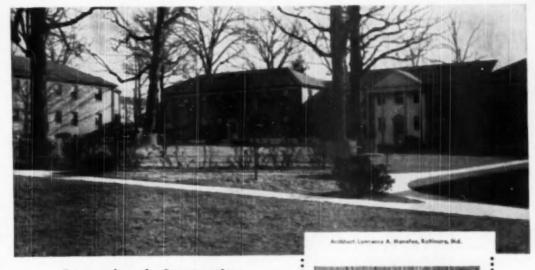
Nothing has contributed more to comfort and saving in time and labor than central heating, automaticallyfired, the hureau said. Central heating began in 1842 when Joseph Nason, a New England engineer, brought the Perkins systems of hot water heating from England, This consisted simply of a boiler and pipe coils installed in the rooms to be heated.

Until the turn of the century, all radiators were made of pipe. Some highly rococo types were in vogue during the period after the Civil War. The type of radiator in use today was introduced in 1905. Significant changes in radiator designs were made about 1925 and again in the early 1930's. The result of these changes in styling is the modern. slender-tube radiator with its attractive vertical lines.

Coincident with the improvements in the design of radiators, other heatdistributing units were being developrd. The introduction of convectors and baseboards is the result of the striving of engineer-designers for the inconspicuous and unobtrusive in heating elements.

Panel heating is hardly more than ten years old. From a half dozen installations a decade ago, panel heating has progressed to more than 100,-000 installations in every type of building.

These developments in more efficient heat distribution have been paralleled by equally significant innovations in boilers, controls, and burners. Boilers have been improved in performance and appearance. To provide the utmost economy there have been developed special gasdesign boilers, oil-design boilers, and boilers made especially for use with stokers. Colorful jackets and the trend toward greater compactness in boilers have stimulated the use of the (Continued on page 156)



Donneybrook Corporation chooses **Ka M** "Century". ASBESTOS-CEMENT ROOFING SHINGLES for appearance, long life, economical installation

When the Donneybrook Apartment Corporation chose K&M "Century" Shingles for the roofing on this modern Towson, Maryland, apartment project, there were good reasons for doing so-three good reasons.

Read what William F. Chew, President of the company says: "We recognized in the use of 'Century' No. 5 Asbestos Roofing that (it) would not only give us the desired effect, but that long life and resistance to fire are features inherent in the product."

Commenting on the economical application of K&M Aslastos Shingles, Mr. Chew says, "We experienced on this installation, which involved over 1400 squares, that the No. 5 Shingles were not only easily, but quickly applied."

The experience of the Donneybrook Corporation proves again that your strongest sales points for K&M Shingles are attractive appearance, long life, and economy. Add to these the recognized freedom from maintenance, and you have a powerful sales story for any owner.

Tell your customers, too, about the "extras" in K&M "Century" Shingles. K&M Shingles resist weather, rust, rot, rodents, and fire. Their eye-pleasing colors—White, Black, Spanish Red, Surf Green, and Graytone—are built in.

With sales points like these, you can build your business—increase your profits—with K&M "Century" Asbestos-Cement Shingles. Ask your K&M Dealer for complete details, or write us direct.



KEM "Century"

ASSESTOS No. 5 SHINGLES USED IN ROOFING THE DONNEYBROOK APARTMENTS

American method appearance; random width, thatched butt construction. Each unit covers over 1 sq. ft. of exposed area. Application cost is low—only 90 shingles per square; 2 nails per shingle; self-aligning. Suitable for reroofing—apply directly over old wood shingles or composition roofs. Give complete weather protection on roof pitches as low as a 4¹¹ rise per foot.

KEASBEY & MATTISON COMPANY - AMBLEB - PENNSYLVANIA

Original manufacturers of Ashestas-Coment Shingles in this country



EDWARDS non-electric DOOR CHIME a big "little extra" in today's market!

Why take chances with the all-important first impression that makes or breaks so many sales?

Now, for little more than the cost of ordinary bells and buzzers, an EDWARDS Door Knocker Chime can *start* your sale right . . . yes, right at the front door!

"FAIRFAX" (shown above) ... classically styled, in gleaning brass with mirror on inside. Absolute tone purity guaranteed by exclusive Sonoscope-test.

No fuss, no wiring. It's on in a jiffy . . , ready to sound that first



sweet, all-important "welcome" note to every prospect!

NEW LOW PRICES. See your electrical contractor or write:

EDWARDS COMPANY, INC. NORWALK, CONN.

In Canada: Edwards of Canada, Lid.



Revise Standard for Fiber Insulating Board

Printed copies of the fourth edition of the Commercial Standard for Structural Fiber Insulating Board, CS42-49, are now available, according to an annouscement of the Commodity Standards Division of the National Bureau of Standards,

The revision was initiated by the Insulating Board Institute, approved by the standing committee, and accepted by the industry. It provides for a new class of interior boards (flameresistant finished surface) and also includes additional requirements of tensile strength perpendicular to surface, and methods of test.

This standard is offered as a basis for common understanding in the insulating board industry and establishes criteria of insulating board value and other physical requirements. In addition, it presents a basis on which performance guarantees may be made to the manufacturer.

Copies of the revised standard are for sale by the Superintendent of Documents, Government Printing Office, Washington 25, D.C., for 10 cents each. A discount of 25 per cent will be allowed on orders of 100 or more copies.

Heating Progress . . .

(Continued from page 134).

basement for recreation and hobbies.

During the first 25 years of the century, all hot water heating systems depended upon gravity for the distribution of hot water. For this reason it was necessary to have the boiler in a havement or other location helow the level of the radiators.

About twenty-five years ago the principle of mechanical circulation of water was introduced. Impelled by a small but powerful electric pump, the hot water can now be directed, positively and quickly, to any place desired from a boiler located in any place, even the attic.

While the era of automatic heating began 30 years ago, its greatest impetus has been attained in the last twenty years. Oil burners, gas burners, and stokers have been developed to meet the demand for effortless and uniform beating.

From the crude thermisstats of 25 years ago, controls have developed into the highly sensitive and precise instruments now available. Styled for beauty as well as accuracy, modern controls provide the ntmost in economy. Among some of the most recent innovations are the indoor-outdoor type of control, the heat-anticipating control, and the electronic control.





Products for Better Living MAKE BATHROOMS "SING" I

Equip them with smartly modern Miami-Carey cabinets, mirrors and matching accessories. Miami-Carey makes four top-quality lines to meet your customers' specific design and budget requirements . . . all designed for easy installation ... and featuring new beauty and construction advantages offered only by Miami-Carey. Competitive pricing and liberal discounts assure your profits!

VENTILATION BY MIAMI-CAREY

Adds sales appeal and value to homes . . . keeps owners happy the year 'round. The Miami-Carey line is complete-includes models for attic, window and kitchen installation . . . each with certified air delivery ratings and a full complement of engineered accessories for economical installation and top performance.

TOUCH OFF YOUR SALES!

Let Miami-Carey's two lines help you. Ask your Miami-Carey dealer or write



157

Low Upkeep Costs with Wood Paneling

Hardwood panels with high insulation qualities cover all interior walls of northern Michigan home

A LL interior walls of this home on Torch Lake, Mich., are finished in hardwood paneling. Originally conceived as a cabin over a planned boathouse, the home, during its evolution, superseded the boathouse entirely to become a year-round residence.

Virgil J. Leech, owner and designer of the home, is president of the General Hardwood Company, Detroit, Mich Leech stated that the cost of paneling was only slightly more than the cost of conventional wall finishes would have been. This difference, he believes, is compensated for by the low upkeep costs of the wood that takes mutilation and banging and requires only shellac and was to repair. This was an important consideration in planning a "summer home" that will serve as a year-round recreation center for the Leech family and their friends.

Three hardwoods-maple, oak, and cypress-were used on the interior walls and in the cabinets. The liv-



ing room is finished in knotty (or antique) oak in solid 34-inch panels which have a pattern run on their edges. Nailing strips on 2 by 4 inch studs help secure the panels. Although 34-inch Celotex and 30-pound building felt are used as sheathing on the outside walls, finished with 10-inch lseveled fir siding, the interior wood paneling and air space have a high in-

BELOW. counterclock

wise, views of dising and kitches area, of

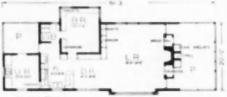
house from lake, and

of and of living room

sulation factor themselves. To match the interior woodwork, a <u>34</u>-inch white oak veneer was glued on the standard living room doors.

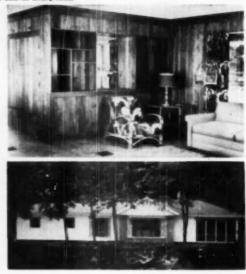
The bedroom is paneled in 3/2-inch hard maple, cut in an edge pattern. White maple cabinets installed in the bedroom were built in the Detroit factory of the owner and reassembled at the house. Twin beds in the room, carrying out the maple motif, are of hird's-eye maple. Ceiling cabinets are build above all walls in the bedroom.

Oak was used to panel the hallway (Continued on page 198)



FLOOR FLas





Nothing heats better than Modine Convector Radiation ... NOTHING LOOKS MORE BEAUTIFUL IN A BEAUTIFUL ROOM IN A BEAUTIFUL ROOM



To find out why the new Modine Convector is the letter way to heat apartments, homes, schools, offices or hospitals, call your Modine Representative. He's listed in the "Where-to-Buy it section of your phone book. Ask to see a sample, or write direct. Modine Mfg. Co., 150 1 Dekoven Avenue, Racine, Wisconsin. Send for New Medine Convector Catalog Today!





The Thrifty Way to Build-in Beauty

You decorate as you build, when you separate rooms with Blue Ridge Patterned Glass. Equally beautiful on both surfaces, it provides a sparkling finish in two rooms . . . which means less plastering. painting or papering.

With walls or partitions of Blue Ridge Patterned Glass, you give your homes more "sell". They're brighter, more appealing because light flows freely from one room to the next. Over 20 viewobscuring patterns give you wide choice in creating individuality.

> To meet specialized needs, Blue Ridge Glass may be Satinol*-finished for greater privacy and Securitized for greater strength. Ask your L-O-F Glass Distributor for details, or write us. 18



"New Adventures in Decorating"

Patterned GLASS

installations of Blue Ridge Patterned Glass in large and small homes. Write for your copy. Blue Ridge Sales Division, Libbey-Owens-Ford Glass Company, \$355 Nichalas Building, Toleda 3, Ohia.

This idea book shows actual

Dealer Conventions ...

(Continued from page 72)

lations," "Store and Yard Modernization," and "Business Management, Forms and Methods," Speakers were headed hy Senator Joseph R. McCarthy of Wistonsin, whose subject was "Housing Legislation in 1949."



CHARLES H. REMPER

Charles H. Kemper of Troy, Mo., was elected president of the group. He succeeds Paul M. Leird of Little Rock, Ark. First, second and third vice presidents are C. D. Burkholder, McPherson, Kana; Henry H. Jones, Little Rock, Ark; and Fred S. Stephenson, Chickasha, Okla. Other officers are: C. W Baker, Kansas City, Mo., treasurer; Frank E. Tyler, Kansas City, Mo., general counsel; and Allan T. Flint, Kansas City, Mo., secretary-manager.

Nebraska

The 59th annual convention of the Nebraska Lumber Merchants Association was held Feb. 22-24 at the city auditorium, Omaha, with a near-record 1,600 persons registering. There were 104 exhibits.

Paul Ely of North Platte was elected president and Emil Coufal. Schuyler, vice president. Phil Runion, Lincoln, is secretary.

Speakers included H. R. Marsh, E. I. Du Pont de Nemours and Co., Chicago; 0. C. Lance, sceretary-manager, National Woodwork Manufacturers Association ; Dr. Ruth Alexander, Chicago columnist; and C. B. Sweet, NRLDA president.

Intermountain

W. Arthur Jones of Cedar City, Utah, was elected president of the Intermountain Lumber Dealers Association at the 7th annual convention in Salt Lake City March 2-4. Registration at the meeting reached 850 and there were 53 exhibits.

The two new Association vice presi-dents are C. G. Morris, Rock Springs, Wyo, and Charles Bohrer, Pocatello, Idahu Melhourne Romney of Salt Lake City is secretary-treasurer.

Directors are M. L. Horsley, Soda (Continued on page 162)



Construction time saved. Vertical 2 x 6's double as structural members and as side frames for the Thermopune. Horizontal 2 x 6's serve as top and horizon frame members, the fixed Thermopune being stopped into place. Ventilating sections are simple, top-hinged sash also glazed with Thermopune.

A house with extra sales appeal..., built faster ..., for less money. That's what builder N. P. Ninneman of Harrisburg. Pa., reports on his unique method of framing *Thermopane** insulating glass in window walls.

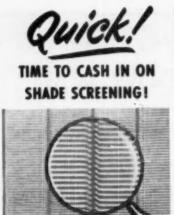
Mr. Ninneman figures his *Thermopane* window wall not only costs less than conventional wall construction, but also saves 20 or more days in construction time.

These benefits are made possible by using structural members of the house as frames to hold standard size *Thermopane* units. This window wall construction goes up so quickly that the house is completely closed in and glazed by the end of the fifth day, so inside work can proceed.

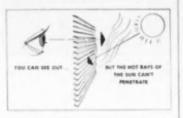
By using window walls, Mr. Ninneman is able to provide a spacious-looking home on a small floor plan. By glazing them with *Thermopane*, Mr. Ninneman assures buyers of comfort they wouldn't have with single-glazed window walls.

Case after case is being reported of builders who are adding the sales appeal of *Thermopane* window walls at little or no extra cost. Have you recently measured its possibilities for your houses?

Property of City Thermopane FOR BETTER VISION SPECIFY INCOMOPANE MADE WITH POLISHED PLATE GLASS And of Day All MADE ONLY BY LIBBEY-OWENS-FORD GLASS COMPANY 3555 Nicholas Building, Toledo 3, Ohio



t's the peak of the season now -- and if you act fast you can still beat competition to the punch with Kaiser Aluminum Shade Screening! It's a fast-selling cooling device with the highest screening mark-up anywhere!



But it isn't just screening. Kaiser Aluminum Shade Screening keeps hottest rooms as much as 15° cooler -by means of thin louvers which block the sun but not the view

It does the work of Venetian blinds plus anwings plus insect screening at one-tenth the cost of all three!

Available in regular or tension frames from sash and screen manufacturers, and in 50-foot rolls from jobbers. We suply ad mats, sales tools, merchandising devices. Get in touch with us fast for AIA file and name of nearest manufacturer or jobber.

If you're a jobber, contact us now for profitable territories still open!

Sales offices and distributors in principal cities.



Produced by Kaiser Aluminum & Chemical Corp. Sold by Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, Calif.

Dealer Conventions

(Continued from page 160)

Springs, Idaho; W. B. Jex, Spanish Fork, Utah; H. B. Richards, Salt Lake City: S. C. Robinson, Salt Lake City: E. D. McCaslin, Burley, Idaho; Vance Petersen, Gunnison, Utah; A. E. Ander-son, Jr., Salt Lake City; H. B. Wheelwright, Ogden, Utah; and W. W. Weigle, Jerome, Idaho, C. W. Gamble, Boise, Idaho, is the dealer-director on the national board.

Western

The 47th annual convention and building materials exhibit of the Western Retail Lumbermens Association was held at the Multnomah Hotel, Portland, Ore., in late January, with 860 persons in at tendance. There were 57 exhibitors.



BALPH HOWARD

Ralph T. Howard of Klamath Falls, Ore,, was named president for the 1950 term, succeeding Kent Rubow, Boise, Idaho. Newly-elected vice presidents are Ira E. Snyder, Enterprise, Ore., and Morris Tarte, Bellingham, Wash. The following vice presidents were reelected : W. L. Johnson, Boise, Idaho; Harold Uglem, Lewiston, Idaho; F. G. Mauser, The Dalles, Ore.; H. F. Mc-Daniel, Eugene, Ore.; C. A. King, Brem-erton, Wash.; and R. E. Wert, Spo-kane, Wash.

United States Senator Wayne Morse of Oregon spoke on "Economic Problems Ahead." Prominent industry speakers included NRLDA President C. B. Sweet, R. A. Hill, advertising sales director of the National Paint, Varnish and Lacquer Association; and Gates Ferguson, general sales manager of the Celotex Corp.

Indiana

The 66th annual convention of the Indiana Lumber and Builders' Supply Association, held Feb. 28 to March 2 at the Murat Temple, Indiana-lis, was one of the group's most successful, R. W. Slagle, secretary-treasurer reported. Attendance, despite had weather, reached approximately 3,000; and the number of exhibitors was 150.

Elected 1950 president at the meeting

(Continued on page 164)



RE-SIDING PROFITS POURING IN NOW!



You can get your share of big profits with Kaiser Aluminum Siding this season - if you act now!

It's a new kind of siding that has permanent beauty, low first-cost, no upkeep costs. Result: Quick sales, high profits for you!



It's easy to work with. Goes on fast. Nailed on one edge only. Curved surface gives extra strength and beauty. assures watertight joints. Has permanent baked-on paint finish.

Made of tough, high grade aluminum. No buckles, wrinkles or "oil cans." Can't rot, rust or warp. Can't be damaged by termites. Resists fire.

We'll supply you with the kind of sales aids and merchandising tools that get results! Act at once, though. It's peak season - and your competition can get the edge on you. Write today for descriptive booklet and name of nearest jobber.

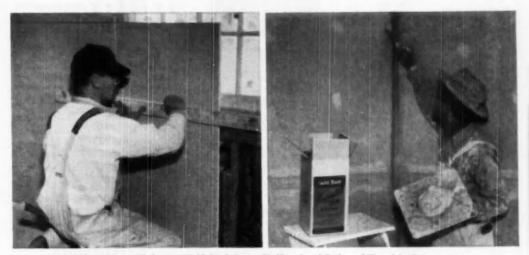
If you're a jobber: Some profitable territories are open. Contact us now! Sales offices and distributors in principal cities.



Produced by Kaiser Aluminum & Chemical Corp. Sold by Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, Calif.

How did Kelly Corp. cut construction costs

in their new 120 unit "Hiramar" development?



These pictures tell the story! Gold Bond Gypsum Wallboard and Perforated Tape Joint System were used for the interior walls of 60 duplex Cape Cod bouses in Hyannis, Mass. These companion Gold Bond products produce walls and ceilings of long-lasting beauty and save weeks in construction time.

A LOT of careful planning went into beautiful "Hiramar" rental development in Hyannis, Mass. Built by the Kelly Corporation, Arlington, Mass., there are a total of 120 living units—one, two and three bedroom apartments. The development is the last word in modern land planning with beautiful landscaping, gently curving streets and walks, five play areas and 100% off-the-street parking.

Kelly Corp. made a wise decision in building this Hiramar job. They standardized on Gold Bond products: Gold Bond Rock Wool Insulation, Gypsum Sheathing, Gypsum Wallboard and Perforated Tape Joint System and Gold Bond Sunflex Paint. Result: Responsibility for performance of all these materials is centered in one reliable manufacturer—National Gypsum Company. Whether you're building 1 house or 100, low-cost or deluxe, let your local Gold Bond Lumber and Building Supply Dealer supply the job from start to finish. That way you get quality building products made to work together for a better, faster finished job.

NATIONAL GYPSUM COMPANY BUFFALO 2, NEW YORK



Fireproof Wallboards, decorative Insulation Boards, Lath, Plaster, Lime, Sheathing, Wall Paint, Rock Wool Insulation, Metal Lath and Sound Control Products.



Dealer Conventions...

(Continued from page 162)

was W. I. Brunton, W. L. Hubbard Lumber Co., Scottsburg, vice president in 1949. John C. McCormick of the McCormick Lumber Co., Lawrence, was named vice president.



W. I. BRUNTON

The entertainment features, including the annual banquet and dance and a twohour theater party, proved especially popular this year.

Among the special speakers were Roy Wenzlick, St. Louis business analyst, Radio Commentator Harrison Wood and H. R. "Cotton" Northup, NRLDA executive vice president.

Michigan

Registration at the annual convention of the Michigan Retail Lumber Dealers. Association Feb. 7-9 at Grand Rapids neared the 2,000 mark. Ninety-one exlubitors occupied 106 booths. The meetmg, the Michigan group's sixty-first anroal, was held at the Pantlind Hotel and the civic auditorium.

Senator Homer Ferguson of Michigan addressed the convention on "Domestic and World Conditions." Other speakers included H. R. Northrup, NRLDA executive vice president; Philip Creden, advertising manager, Edward Hines Lumber Cu., Chicago; and Col. Robert M. Brooks, Jr., Roy Wenzlick and Co., St. Louis.

Lester Essenburg, Holland, was elected president of the Association. He had been acting as president during the assexpired term of the late Axel Becker of Monroe. Others on the officer roster are; vice presidents, Walter Peacock, Port Huron, and T. R. Peterson, Grayling; secretary, Hunter M. Gaines, Lansing; assistant secretary, Donald J. Mor. Lansing; treasurer, Norman B. Cove, Lansing ; and counsel, Donald P. Schour, Thermit

Mountain States

Approximately 1,000 persons attended the Mountain States Lumber Dealers Association convention at the Shirley Savoy Hotel, Denver, Feb 8-10 The number of exhibitors was 54.

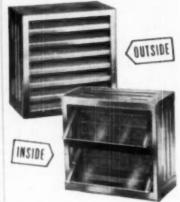
Elected president of the Mountain group was Carl A. Wangherg of Colo-(Continued on page 166)



UTILITY has permanent stainless steel WEATHER - BLOC louvers on the outside and ad-justable glass louvers on the inside. Available in 6, 8

Scanamy and Utility Weather-Bloc are well adapted for becoments and other law level locations where glass louvers might be subject to brookage.

and 12-inch sizes.





WEATHER-BLOC takes no longer to install than a single glass block simply set in place of a glass block. Used in HOMES, STORES OFFICES and INDUSTRY. WEATHER BLOC offers controlled ventilation also minum screen inside retards rain, snow, diff and somects . no sacrifice to beauty or **PEINACY** permanent stainless steel body.

in Old or Newly Completed Glass Black Panels where Ventilation is Desired, Breek Out Single Glass Black and Replace with Weather-Blac.

Aroliahis Through Your Glass Black Dealer or Jabbo Also Nationally Distributed by Winca Ventileter Co., Inc. 533 Bittmer Street, St. Louis, Missouri

WEATHER-BLOC			
TRADE MADE	PATENT PENDENG		
	Avenue, Chicago 13, Hilinois templete information and prices.		
Name			
Address			
6	Zono Buto		

HERE ARE THE 25 MOST POPULAR MODULAR SIZE

WOOD WINDOWS THAT SAVE BUILDING TIME AND COSTSI

Less cutting and trimming on the job ... less waste ... lower building cost! These are the reasons why it pays to insist on modular-size windows, sash and frames!

The 25 most popular sizes of 5 of the most popular designs shown on this page are manufactured on the 4-inch "module" or unit of measurement. All are available promptly. See your lumber dealer.

OPENING SIZES		G	LASS SIZES_	1%" CHECK	RAIL WINDOW	VS
(Note: Windows are made 36° narrowor and 36° sharter than window apon- ing sizes shown below)		Two Logis	Faur Light	Top Three Cable Web	Tap Sin Lipho	Tantos, Judo
2-0x3-3 2-0x2-0 2-0x5-10 2-0x4-6 2-0x5-2		30x16 30x18 30x20 20x24 30x29	30% 7% 30% 8% 30% 9% 30% 1% 30% 13%	61/3×16 61/3×18 61/3×20 61/3×24 61/3×28	61/1 8 61/1 9 61/1 10 61/1 11 61/1 11	67150 8 67500 0 675010 675010 675010
3-4=3-2 3-4=3-4 2-4=3-10 3-4=4-3 3-4=4-4 3-4=4-10 3-4=5-2		24x14 24x18 24x20 24x24 24x24 24x24 24x26 24x28	34. 7% 34. 8% 24. 8% 34. 10% 34.10% 34.11% 34.13%	7 1 5pc 16 7 1 5pc 16 7 1 5pc 16 7 1 5pc 20 7 1 5pc 22 7 1 5pc 26 7 1 5pc 26 7 1 5pc 26	215 gas 6 215 gas 6 215 gas 10 215 gas 10 215 gas 11 215 gas 13 215 gas 13 215 gas 13 215 gas 13	6 c 8 6 a 9 6 a 10 6 a 11 6 a 13 8 a 13 8 a 13 8 a 13 8 a 13
3-4+3-2 3-4+3-4 3-4+3-10 3-4+4-3 3-4+4-4 3-4+4-4 3-4+3-10 2-4+5-2		20x16 20x10 20x20 20x22 20x24 28x26 28x26	38+ 7 % 38+ 8 % 38+ 9 % 38+ 10 % 38+ 11 % 38+ 12 %	0 1ga 16 0 1ga 18 0 1ga 20 0 1ga 22 0 1ga 22 0 1ga 24 0 1ga 26 0 1ga 28	0 1 1 2 8 0 1 1 2 9 0 1 1 2 1 0 0 1 1 2 1 0 0 1 2 2 1 2 0 1 2 2 1 2 0 1 2 2 1 2 1 4	9''ga16 9''ga15 9''ga15 9''ga14
				Top Four Light Wide	Top Eight Light Four Wide	Sisteen Light
3-0x3-2 3-0x3-4 3-0x3-10 3-0x4-4		32n 16 33n 16 33n 30 33n 24	32x 7% 35x 8% 32x 9% 32x 1%	7 1940 16 7 1940 16 7 1940 20 7 1940 24	7 1/44 8 7 1/44 9 7 1/44 10 7 1/44 12	7 1440 0 7 1440 0 7 1440 0 7 1440 10 7 1440 13
3-4=3-10 3-4=4-4	1.1	34x 20 36x 24	20.11	8-1/ax30 8-1/ax34	# figs 10 # figs 12	815ter 8 815ter 12

For additional data, see our catalog in Sweet's Builders' File

POPULAR DESIGNS OF MODULAR-SIZE WOOD WINDOWS Made of ponderosa pine, these modular-size windows have the natural insulating advantages that wood so handsomely provides. They hold paint or other finishes lastingly . . . discourage condensation. They are available toxic preservative treated at the factory for extra resistance where staining, decay, insect attack or humidity are factors. Ask your dealer for them.

Gentlemen. I want to know more about modular design woodwark. Please send me rour folder. New Savings for Builders.

Name

Can

Address

National Woodwork Manufacturers Assn. 532 South Michigan Avenue Chicago 4, Illinois

NATIONAL WOODWORK MANUFACTURERS ASSOCIATION

LICENSE TOXIC-PRESERVATION

PPROVED

NATL WOODWORE MIRS. ASSA.

332 SOUTH MICHIGAN AVENUE CHICAGO 4. ILLINOIS

This seal of approval identifies woodwork products which west NBMA minimum standards of texts preterrative treatment.

MAT 1950

145

I am State

MORE DOLLARS AND SENSE!

ENERAL ESTIMATE

white Connection

el dave

8-FT.

WEIGHS

3/ LESS

ROOT-PROOF

JOINTS

More Facts that <u>Prove</u> Bermico Cuts Building Costs

Bermico's convenient 8-foot lengths store more safely with far less breakage... are easier to handle on the truck or job. Bermico weighs only big as much as other types of pipe. A cinch to lay, too. No joining compound needed. A few hammer blows and Bermico joints are tight... and stay tight even when the ground shifts underneath!

Small wonder builders find that Bermico saves money, time, effort all along the line. Bermico is a hit with customers, too. It's rootproof, leakproof, watertight ... unaffected by temperature extremes ... Bermico assures a smooth, dependable high capacity water flow.

That's why, today, millions of feet of Bermico are in use in house-to-sewer connections, septic tank disposal and drainage systems.

Bermico can cut your costs for time and labor and increase your profit as well. Drop us a line and get the whole story of why it pays to insist on Bermico Sewer Pipe.

SEWER PIPE

PRODUCT OF BROWN COMPANY

Dept. A-15, Brown Co., 500 Fifth Ave., N.Y.

RMIC

40



(Continued from page 164)

rado Springs. J. F. Scott, Denver, is vice president and J. V. Smith, Denver, socretary-treasurer.



CARL A. WANGBERG

Directors are R. B. Allen, Portales, N.M.; H. H. Hast, Denver; G. G. Morris, Rock Springs, Wyon; B. E. Payne, Carlsbad, N.M.; C. C. Phillippe, Basin, Wyo.; T. H. Walker, Casper, Wyo.; H. I. Williams, Durango, Colo.; C. A. Wangberg and J. F. Scott.

Bell Prime Mover Division Sold to Iowa Company

The Bell Aircraft Corp. has sold its Prime Mover Division to a newlyformed company in Muscatine. Iowa. The purchaser is the Prime Mover Co., a subsidiary of the Home-O-Nize Co., manufacturer of home appliances and machinery. Head of both Home-O-Nize and the new subsidiary is C. M. Stanley, well-known engineer and president of the Iowa Engineering Society.

The Prinie Mover, a materials handling machine often referred to as a motorized wheelbarrow, has been in production in Bell's Buffalo plant since late 1947 and is being sold, the company said, "In order that we can devote all of our activity and attention to acceleration of high military schedules delayed by last year's 19-week strike."

Two Bell Corp. officials have been elected to the board of directors of the new Prime Mover Co.— Harvey Gaylord, treasurer, and George Olmsted, director, who is also an official of the Hawkeye Casualty Co. of Des Moines, Iowa.

Under the terms of the contract which transfers the Prime Mover business to the new firm, Bell will continue as an active participant for a period of years. Terms of sale stipulate percentage payments to Bell on prime Mover volume by the new company for more than 10 years.

ALL-ALUMINUM SCREENS FOR EASY SALES AND GREATER PROFITS

FOR WOOD WINDOWS:

No ladder needed-Reinforced by crass brace, screens can be hung or removed from inside the house. Very light weight. Easily bandled by Mei. Henryile.



Because they are light in weight, they are easy to Handle--Demonstrate-Deliver, (Many customers will take them home in their own cars.)

Made of rust-free aluminum and packaged in a handy carton. Do not deteriorate while in the warebowie. Take up minimum stockroom space, because carton of 10 screens is under 5" thick

Manufactured by modern methods-assembled on a production line-by people with a decade of experience in alumin



FOR METAL WINDOWS.

Attached with WING CLIPS (at no extra cuir). After initalie tion, no screwdriver needed to change us remove screen for window washing. Flips of instantly. No love screws to get lost.

Your Guarantee for uniform top quality and freedom from coninmer complaints.

All standard sizes for wood and metal windows available from stock-shortest delivery time on special orders. You can take all your screen problems to Fabrico.

DISTRIBUTORS INVITED For samples, prices and information on unailable franchises, write Department E.

Screens & Fabricated Metals Corp.

NORTH BERGEN . NEW JERSEY -IN ANY QUANTITY - IN ONE QUALITY - THE BEST! -Light Weight. Screens are easily handled Corner Locks give wedge fit without corquickly installed. rosive effect or discoloration. Rolled Tubular Section. 18 x 14 mesh Alclad aluminum screening combines corrosion-resistance with maximum strength. Held at maximum tautness by speciallygo for No Stains, no discoloration of walls, designed aluminum spline. Precision engineered for maximum strength and rigidity. woodwork, draperies or blinds. Hardware Included complete with rustresisting hanging or attaching devices. Can be used also to hang storm windows. WING SCREENS CLIP for casement windows.

Protective A glowing cig arette or windswept burning leaves will not harm the screen.



FABRICO



· REGISTER APPLIED FOR

Rugged Strength. Will Not Red-Rust. Need No Painting. No upkeep.

BRADFORD ELECTRIC SAWS



Model 180 - 8 Saw Streight cut: 2 39/32" max.; 1" min. Bevel cut at 45": 2 1/16" max.

These new 6" and 8" Bradford Portable Electric Saws are ruggedly constructed and fully powered to take on the toughest sawing jobs! They're better designed — inside and out — for easier handling, smoother sawing, more accurate work. You can feel the difference in the Bradford design!

And Bradford Saws are built to last. Ball bearings with permanent lubrication are used throughout. Gears are helical cut to give maximum driving power. A powerful 110 volt AC/DC motor drives the blade with quiet, cool-running efficiency.

Own a new Bradford Portable Electric Saw — they're the choice of craftsmen everywhere. See your Bradford dealer for a demonstration. Write for bulletins giving specifications and prices.

THE BRADFORD MACHINE TOOL CO.

454 Evans Street Cincinnati, Ohio Precision since 1840

168

R. E. Saberson Joins Reserve Supply Co. In Expansion Program

Reserve Supply Co., St. Paul, Minn, has completed plans for expanding its functions with the addition of a merchandising department, according to a recent announcement by J. R. Randall, president.

R. E. Saberson, who has been in charge of the trade promotion department of Weyerhaeuser Sales Co. for



several years, has joined the Reserve Supply organization in a full-time capacity and took charge of the new department April 1.

Johnnie Giles, a member of the executive staff since 1947, will devote increased time to administrative duties under the expanded program.

In commenting on the expansion plans of the company, Randall stated that "It will be the policy of our merchandising department to integrate closely the promotional activities of our suppliers with the sales program of our dealers and to make maximum use of the unusual opportunities for doing so which exists in our organization.

"Mr. Saberson has been familiar with the objectives of the Reserve from the beginning and is equally well-acquainted with all phases of the distribution problems of our suppliers and members. We feel certain that a carefully coordinated merchandising program of this kind can do a great deal to stimulate the movement of building materials from the producer, through the lumber yard, to the ultimate consumer."

1950 Home Improvements May Total \$6 Billion

Expenditures for modernization, repair, and remodeling of homes in 1950 may come to as much as \$6 billion, or not far below the amount expected to be spent for construction of new homes, according to an estimate by James M. Ashley, president of the Producers' Council.

STAPLE—to save time speed up production



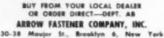
T-32 Gun Tacker

Replaces hommer and tacks at trigger rate speed. Shoots a staple wherever a tack can be driven. Island fastener for Carpenters, Insulators, Roafers, etc. All steel construction with chrome Brish, Special screen and window shoole attractments. Loads 150 staples—3/16", 1/4" and 5/16", \$8.50. Restproof "Mone" staples available.





P-22 Hand Stapler "Reiches into hard tapet at places." Inlead for hugging, exappings, seding logs, etc. All tree instruction with throne finith. Some muchine takes 1/4" and 5/16" staples. Look 150 steples. 54.00. 2202 Standard Precision built Stagler and Tocker All steel construction with choose finish. Foreiens up, to 40 sheen of poper. Load 210 Standard Staglers V₂^{**} × V₂^{**}. Temperary and Partnessent Stitch. Price 55 00



Slightly higher in the West and Con

The mouler se, breaklyn a, new Ters



GEO. C. BROWN & CO., Inc. BREINSBORD, N. C. BETALLISED 1845 LARGEST MANUFACTURERS OF ANOMATIC FRD CEDAR IN THE WORLD

turn houses into cash...faster

Here's how to build attractive, durable houses at prices that appeal to home buyers . . . and with extra features that help close sales quickly.

When you add new, modern attractiveness to your houses, and cut costs in the process, you're bound to attract more buyers.

That's what happens when you build with modern, reinforced concrete stucco... according to the Keystone System of Stucco Application.

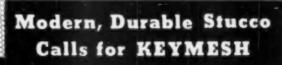
Stucco's design possibilities fit perfectly with modern house styling. Stacco's lower cost not only reduces house prices, but also permits the addition of extra features in your houses that increase their sales appeal.

The Keystone System of Stucco Application assures durability in stucco construction. Stucco applied the Keystone way is on to stay because heavy-gauge Keymesh Reinforcing is embedded in the center of the slab.

> For complete information about the Keystone System of Stocco Application, write for your capy of the 44-page "Keystone System" book.

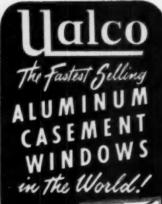
CEYSTONE STEEL & WIRE COMPANY Peerin 7, Illinaia

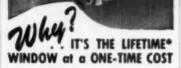
Manufacturers of Kaymonk Roinforcing - Nails - Wolded Fabric - Tis Wire





MAY 1950





Your prospects want Ualco Lifetime Aluminum Casement Windows! They want them because these windows cost only a little more at first . . @ lot less within a few years.

Upkeep an Ualca is nil . . is absolutely nothing. That's why Ualca sales soar! That's why your profils pyramidi And that's why it can be worth a few minutes of your time to get complete details . . now!



How Contractor Saved Money On Special Flooring Job

AYING a new floor of first grade tongue-and-growe maple for the Rollercade skating rink at Berelan and Haverhill Drives, Toledo, Ohio, presented a number of unusual problems for Ray Willis, floor contractor and manager of the Superior Floor Laying and Surfacing Ca., Toledo, Ohio. The new floor was laid in a rotunda

design in which the 25/32 inches by



ROUTER and shaper is used to put tongue on ends of center boards cut on radius

 $1\frac{1}{2}$ inches maple flooring was laid flat and curved in the shape of a large oval. The inner curve of this floor has a $17\frac{1}{2}$ foot radius—one of the smallest radii of any yet laid in which the strips are laid flat. This required a sharp curvature of the boards at both ends of the floor.



TOUGHEST curves were near center in laying this Rollercode floor. Workman is shown placing strips at outer edge of floor where radius is greater

There are two methods that may be used in laying this type of floor. In one method, a form is nailed in place to outline the center area or "core" of the rotunda design. The boards are then laid in a forced curve beginning (Continued on page 172)

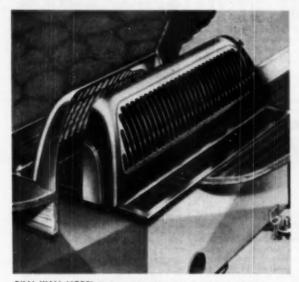


A central market place for the builder — where he can fill all his structural steel needs — that's international Steel, tribunational will furnish you with steel, from uingle building items — steel trusses, calumns, gioters, joists, windows, steirs, doers — to complete all-steel buildings ... whatever your jobs require.

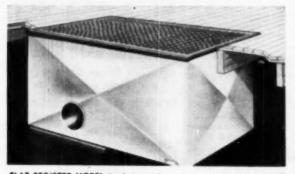
International's staff of export designers, estimators, and engineers is always roady to help you with any building problem. Write today.



Modern automatic heat that's low-cost and easy to install...helps sell houses faster



DUAL WALL MODEL fits beneath partition or well and heats adjoining rooms.



FLAT REGISTER MODEL lies fush with floor. Easy and economical to install!

FLAT REGISTER AND DUAL WALL MODELS—The Flat Register Model lies flush with the floor. The Dual Wall model fits beneath wall or partition to heat adjoining rooms at same time. Coleman Floor Furnaces come in models from 25,000 to 70,000 BTU rating. Coleman makes them for Gas, Oil and LP-gas. Not an adaptation but a complete new heat engineering job throughout. Send coupon for more information.



SHALLOFLOW

The liftle forsace with big-forsace bootf So shallow it saves up to 18" on depth. It's flood-proof to 19" below floor. Though small, it has the dependable heating efficiency for which the larger models are famous.

Coleman Floor Furnaces Models for Gas, Oil and LP-gas

ECONOMICAL FOR BUILDER AND BUYER — The modern low-cost heating unit that keeps costs down. The Coleman Floor Furnace fits in the floor and gives clean, silent, economical heating. Installation is easy and low-cost because (1) No basement or pit is needed; (2) There's no expensive plumbing; (3) There are no air ducts. A Coleman makes and mores the heat for circulated warm air through 4 to 5 rooms, with a complete change of warm air 3 to 5 times an hour.



Saves space · Saves cost COLEMAN'S Hendy GAS WALL HEATER

Fits in wall between upright studs; extends out only 3 %.". Uses no room space. Ideal for slab-floor homes A heatmover that circulates warm air. A heater of many uses.



Also in Dual Wall model to keat two adjaining rooms of the some time

Warld's largest memories	turer of hom	a heating aquipma
The Galeman Company, is	ns., Dapi. AB-	758, Wichile 1, Kana
Please send informatio Coleman Flaer Furnace Coleman Gas Wall Her		State whether IS 08 LP-1
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histing, moisture-resistant seal when you use Cabot's Clear Waterproofings.

PREVENT EXPENSIVE WATER DAMAGE

Protects both you and the owner against damage caused by water seepage

freezing and thawing . . . unsightly efflorescence. Cabot's Waterproofings penetrate deep into voids and pores of masonry walls ... provide long-lasting, moisture-resistant seal. Walls treated as many as twenty years ago with Cabot's Waterproofings are still moisture-proof today

Whether you're building one house or a development, if you use above-grade masonry, protect it with Cabot's Waterproofings



proofings and complete information. Address



How Contractor Saved. (Continued from page 170)

at this form and proceeding outwards toward the edges until the entire outer area is laid. Then the center form is removed and the inner "core" is laid of straight boards-whose ends have been cut on a radius and a tongue put on. This method was chosen by Mr. Willis for this job.

The other method, which requires a portable router, starts by laying the center "core" area first. Then the portable shaper and router are used



CENTER area is left open, filled in later with strips laid straight. Parts of floor in Bollercade are being sanded while work of laying the floor proceeds

to trim the ends to a chalk line at the proper radius and add a tongue to the ends. This serves as the form for the curves in the rotunda design. Willis believes this second method would have advantages over the first method -but as he did not have a portable router available when he started the job, he elected to proceed by the first method

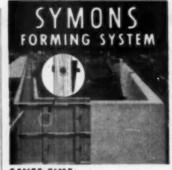
The floor is 220 feet by 120 feet, total area 26,400 square feet. Originally the building had been used for ice skating. Then a maple floor was laid about six years ago, and it re-



FINAL cut is made with No. 1 grit, using American 8-inch heavy duty sanders

ceived hard and rigorous wear as a roller skating rink. The new rotunda type floor was laid over the old floor, using a 30 pound creosote treated felt paper as a base. Eight men worked on the flooring job which was completed in 15 days.

(Continued on page 178)



AVES TIME

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iders, wolars and bracing . P is of form ... Costs drop to a new la Plus

RENTED WITH PURCHASE OFTION WRITE TODAY FOR FREE CATALOG





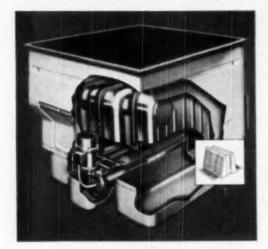
- SAVE \$2.00 to \$3.00 per window.
- · It is invisible rust resisting.
- · Installation less than 1 minute. Easy to install.
- · Eliminates' sticking, binding or rattling of window.
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- Over 200,000 now in use.
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DEALERS: Write or wire for descriptive liters and liberal discounts. Free demonstrator window nter window with first order of 1/2 gross or more. Ad mote on request ROCKFORD SASH HOLDER, INC.

ROCKFORD, ILLINOIS

NEW gas floor furnace facts!

You may know gas floar furnaces from A to Z. But if you haven't checked "Duo-Therm" lately, your facts may be as dated as last year's fishing license.



What's hot that Duo-Therm's got?

4 Feature-Packed Gas Floor Furnaces with-



Exclusive Equations Burner, Built to give long-life plus efficient performance with all types of gas. Clean-burning, quiet and trouble-free. Burns a uniform flame at all ports at all stages of fre.

Exclusive Comfort Selector. Eliminates "chills and fever" heating. Gets rid of that off-and-on, on-and-off operation. A flip of the switch on the side of the thermostat tailors low fre setting to fit the weather.

Revolutionary All-in-One Control. A compact, complete performance-packed package that's a cinch to convert to automatic at any time. Automatic safety shut-off standard on all models.

Generous 10-Year Warrenty - on all models.

Over 1,500,000 Warmly Satisfied Customers

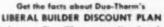


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DESC. PROPERTY IN A 1

Plus More Built-in Builder Benefits than we could list on this whole page!

- All models shipped ready to install quickly and easily.
- So compact that only one joist need be cut on any installation!
- Designed so most service jobs can be handled from above the floor.
- Built to Duo-Therm quality standards, yet priced amazingly low.
- Two Series—shallow and standard—to fit any home.
- Choice of floor or dual-wall registers on all models.
- · Range of BTU inputs from 35,000 to 60,000.
- Thermostatic or manual controls available on every model.
- Waterproofed to meet regional FHA requirements.
- . AGA approved.



Ask your Duo-Therm supplier for the inside story on special single and quantity discounts to fit your needs.

FREE! Get the "Specs" on the Duo-Therm Gas Floor Furnace Story!

• Complete, Detailed Specifications -- the "nuts and holts" facts you want on all 4 Duo-Therm Gas Floor Furnaces.

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Fill out and mail coupon for descriptive literature.

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Please send your obligation or co	floor furnace literature pronto, without st.
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STANLEY PLANES Make the most of your skill

The choice of 9 out of 10 woodworkers, Stanley Planes feel right ... work right. These planes—and many other types of planes—are part of the complete line of Stanley Tools, When you huy tools, look for this famous trade-mark. Stanley Tools, New Britain, Conn.





HARDWARE - TOOLS ELECTRIC TOOLS - STEEL STRAPPING - STEEL 174

How Contractor Saved . . . (Continued from page 172)

First step in starting the job was to examine the old floor carefully, as this would be the subfloor for the new installation. All dirt was removed, broken loards were replaced, raised nails were driven down, and the contractor made sure the floor was level and solid. The old floor was swept clean, using no water.

Then the felt paper was laid. Next an area in the center was chalked in the shape of an oval 100 feet long and 35 feet wide. A form was made of wood strips nailed down to outline the perimeter of this oval.

Then the contractor started laying the strips, beginning with the smallest radius curves at the end of the oval and proceeding outwards from the form. A special jack was used for bending the strips which were laid flat. The workmen laid a width of about twelve strips at a time around the oval.

Proper nails and correct nailing are important in every flooring job to hold the flooring securely in place, make the floor rigid, and prevent squeaks. In this particular installation the contractor used heat-tempered #7 "Screw-tite" nails. These nails were required to anchor the strips firmly under the stresses and strains of forced curving. The nails were started through the strip where the tongue leaves the shoulder, and driven inwardly at an angle of 45 to 50 degrees to the floor. The nails were spaced approximately 8 inches apart on the curves, and 12 inches apart on the straightaways.

Drawing up is also an important part of proper installation—especially on straight sections. Where curves are forced, this operation usually eliminates the need for additional drawing up. After laying three or four strips of the flooring in the straightaway areas, the workmen placed a short piece of straight-edged hardwood against the tongue of the outside strip of flooring and drove it up snugly. This located the flooring strips in their proper final position.

In this manner the oval was completed to the edges of the room on three sides and to a halfway area on the fourth side. As this hallway was to be laid of straight strips, the contractor used a portable router to cut off the irregular edges of the oval in a straight line. He then put a tongue on the edge of these strips, to match the grooves of strips laid straight in the ,hallway.

To fill in the core of the oval, the (Continued on page 176)

New portable KOHLER ELECTRIC PLANT saves time... lowers costs!

Carry your own electricity. Finish more jobs in less time. Operate electric saws, drills, pipe threaders, cutters. Avoid delays, trouble, expense of arranging power hock-up. This compact Kohler plant has a rating of 1000 watts for general use, 1500 watts maximum for intermittent duty. Operates tools having universal (AC-DC) motors. Weighs only 75 lbs. Easy to carry by convenient handle. Powered by quickstarting, 4-cycle, nir-cooled Kohler Engine. Complete with 1/2 gallon fuel tank. Low in cost. Many other sizes available. Write for folder K-11. Kohler Co., Kohler, Wisconsin.

Model 1065822, 11880 walls, 115 rol; DC. Manual control. Length 15", width 14", height 22".

KOHLER OF KOHLER

WILLYS' NEW RRIGANE

F-HEAD ENGINE

7.4-1 COMPRESSION GIVES MORE POWER, MORE MILEAGE

You are looking at America's newest, most advanced engine. It is a 4-cylinder, F-head engine-with valve-in-head intake and valvein-block exhaust. It has 7.4-1 compression, but does not require premium fuel. Its short, evenly-heated intake manifold and giant-size intake valve deliver a full charge of fuel mixture to each cylinder at any speed. It literally squeezes more energy from every drop of gas. giving lower fuel consumption and higher horsepower. See the new Willys models with the HURRICANE Engine at Willys Dealers.



THE NEW WILLYS STATION WAGON

Here's the new all-steel Willys Station Wagon . . . handsomely restyled ... HURRICANEpowered for stepped-up performance and long mileage. It's two cars in one-a comfortable passenger car and, with seats out, a big-cargo vehicle for hauling.

A New 1/2-Ton Truck

WITH "HURRICANE" POWE

With its money-saving HURRI-CANE Engine and long-lasting functional body, this new 14-ton Willys Truck is the top buy in its field. Comfortable cab ... sensible fenders . . . high road clearance ... a host of other features. 118inch wheelbase; 4250 lbs. GVW.



WILLYS-OVERLAND MOTORS, TOLEDO, OHIO . MAKERS OF AMERICA'S MOST USEFUL VEHICLES MAY 1950 175



How Contractor Seved ... (Continued from page 176)

form was removed and strips were laid straight in this area. Each end of

laid straight in this area. Each end of center boards was cut on a radius, and a tongue was put on using a router and shaper.

The sanding operation included two cuts, using #2 and #1 grits. The contractor employed a full complement of American machines, including two Super 8-inch sanders, two standard 8-inch sanders, three edgers, one sanderplane belt sander and two Dehtxee floor maintenance machines. In using the Super 8 sanders with #1 grit, he made a cut at 2200 RPM, 65 pound pressure, with 220 volt current. By using these machines, he eliminated one cut. He followed the grain on all cuts, sanding a quarter of the oval at a time.

It is important to have adequate capacity in both cable and current. The cable used by Willis was #8 and #10, high-grade rubber-covered cable. As the current tested a full 220, in this instance, a booster was not required. However, a voltage booster will many times save money for the contractor by assuring full power on the job. This avoids damage to equipment and prevents loss of time and labor through slow-operating machines. A new booster for this purpose is manufactured by the American Floor Surfacing Machine Co., Toledo, Ohio, which will transform weak voltages of 95 or 105 volts to a full 115 or 230 volts. Also, it boosts 115 or 208 to 230 volts. . . . and will reduce 208 volts to 115 volts. All portable electric equipment up to 5 H.P. can be operated with a booster of this type.

Suppliers for this job: American Floor Surfacing Machine Co., Toleslo, O.—American Super & Floor Sander Atlas Company, Kalamazoo, Mich.— Tongue-and-Grove Router Horner Flooring Co., Dollar Bay, Mich. manufacturing of maple flooring Independent Nail and Packing Co., Bridgewater, Muss. — Screw-Tite Nails.

'49 Seedling Production

More than 380,000,000 seedlings were produced in the nation's nurseries in 1949, enough trees to reforest a third of a mill on acres, according to a survey of all federal, state and private nurseries made by J. C. Mc-Clellan, chief forester for American Forest Products Industries. McClellan said that, assuming a survival rate of two-thirds, the 1949 crop will in a half century supply the country's wood needs for a year. Estimates for 1950 call for more than 500,000 seedlings, enough trees to reforest half a million acres.



Johns-Manville Presents....the New

Smoothgrain

PERMATONE CASBESTOS SIDING

... a revolutionary improvement!

Beautiful New Colors!

Line your level against the surface of the new J-M SMOOTHGRAIN PERMATONE Shingle ... you'll find it smooth and true. Now look at its beauty from any angle ... you'll see a rich texture of striking character, even though the surface of the shingle is actually smooth?

These new Smoothgrain asbestos shingles are itronger because they have the same cross section throughout... they cut cleaner because the shingle cutter always works against a smooth surface... they resist milling better and always look the same from any angle, because they have no grooves, no raised texture to catch dirt or highlights and thus distort appearance.

SMOOTHGRAIN Shingles are available in an outstanding variety of beautiful colors, all PERMATONE colors. An "Permatone" implies, the color is "sealed in"... comes from myriads of tiny ceramic granules embedded into the asbestos-cement.

The colors include Heather Green, Autumn Brown, the distinctively rich and practical Weathered Gray, and the ever-popular Silver Gray which goes well with

any trim or color scheme. For full information, write Johns-Manville, Box 290, New York 16, N. Y.

ASK TO SEE SAMPLES!

Smooth surface... no grooves...yet beautifully "grained"!



177



- Unique air intake prevents air re-circulation at inlet.
- Outside wall cap-aluminum ... rustproof-has built-in balanced louvres. Overhang keeps out rain, drafts, cold.
- Beautifully designed ... superbly finished ... priced right.

FASCO well ventilators are used by Amorica's targest builders . . . 15,000 IN LEVITY HOUSES ALONE! The new FASCO "CEL-N-WALL" vent will be a loader, teal

WRITE, WIRE or PHONE for complete information. FASCO Industries, Inc., 20 Union St., Rochester 2, N.Y. (Phone HAmilton 1800).



'Open End' Mortgages Could Triple Spending On Home Improvements

A "gold mine of credit" is offered to firms in home improvement work by the "open end" mortgage, according to a statement by Richard G. Breeden, secretary-manager of the Insulating Siding Association. Breeden said that it has been predicted that general adoption of this method of financing could double or even triple the present two billion dollars spent annually on home improvements.

Breeden stated that while often available when FHA Title I is not, the "open end" mortgage is by no means a mere substitute, but in many cases is to be preferred to the FHA instrument, offering greater immediate and long-term advantages to the contractor, customer and lending institution.

In its purest form, he said, the provision to make additional loans is written right into the original mortgage. However, only recently have lending institutions begun writing such original mortgages and so most "open end" mortgages at present will depend upon later arrangements between the customer and his mortgage holder.

The following example was given by Breeden to illustrate the possibilities of this type of mortgage:

"John Jones had an original mortgage on his home of \$5,000 at five per cent. How he's paid off \$2,000, He decides to improve his home by having insulating siding applied. He gets an estimate of \$500 for the work from a siding contractor.

"To finance this amount under Title I, with its maximum three-year term, would be too heavy a burden for him to carry. Also, because Title I loans are commonly discounted in advance, he might have to pay an interest rate which amounts, in effect, to 952 per cent.

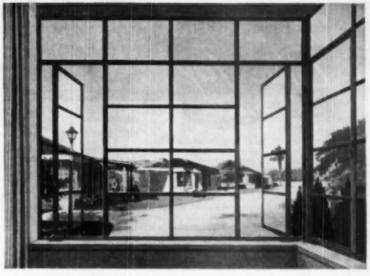
"However, the siding contractor points out that the agency holding his mortgage probably would advance the \$200 under the original mortgage terms. The agency advances the money, simply adding the amount to the remainder due on the mortgage and increasing the monthly payments slightly to make up the difference."

Breeden pointed out that the various means of writing "open end" mortgages depended on the legal requirements of each state and locality; and that, while it is a matter which is the concern of the lending institution and not the contractor, the contractor should be well-acquainted with basic legal problems and local policies governing such transactions.



AMERICAN BUILDER

Chicago Pittsburgh FR 1-578 AT 1-280



Corner Windows On Your Budget

You can have these modern corner window arrangements with standard Lupton Casements. Bright room interiors, draft-free ventilation , . , and Lupton Metal Windows help you to close the sale.

Builders like the economy features of Lupton Metal Windows: (1) Easy-to-install, they save time on the job; (2) Available for immediate delivery from warehouse stock; (3) Complete with finest operating hardware.

Lupton Casements are available in steel and aluminum. Frames are precision built at every point . . . will not warp, swell or shrink. Neat, metal frame screens and glass insulating panels are easily attached on the inside of the window. Catalog with list of representatives sent on request.

MICHAEL FLYNN MANUFACTURING COMPANY 700 East Godfrey Avenue, Philadelphia 24, Penna. Member of the Metal Window Institute

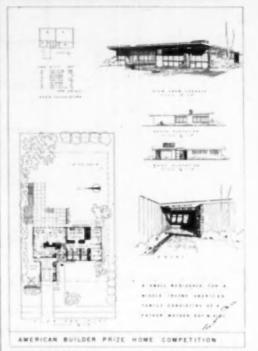
LUPTON METAL WINDOWS



for thousands of contractors now successfully using my simple factors in preparing their cost estimates on materials and labor. I want to become your "silent consultant" by placing at your elbow. for immediate reference. the bailed down estemes at my 40 years' experience - expressed in simple factors that require only the application of your local wage and material rates to arrive at a competitive, yet safe cost, as a basis for co Mail the saupon to me today.

Gordon My Vamblyn GUARANTEE _____ GORDON TAMBLEN. THE TAMBLEN SYSTEM 1 As a reader of this publication 1113 So. Peori St. A-41 Denver, Colorado we are warranted in sending Send me the complete Tambiya System an Iree 10 days might \$1.1 like is, I will pay **98.75** when 10 days are up and \$7.50 permanth, with \$18.75 is paid. Otherwise I will return it. 1 you a copy of the complete Tamblyn System for 10 days 1 free inspection. At the end of inspection period, you may mail it back or pay \$38.75 in easy monthly payments Address Stute

WHO Won Fourth Prize?



AMERICAN BUILDER assures its readers that it does not go in for guessing games, even though it incovertently omitted the name of the fourth prize winner in its recent women's architectural contest when the winning entries were reviewed in the April insue. This excellent design (Page 79. April) was submitted by MISS NANCY C. REEVES, to whom we humbly apologize. Miss Reeves is a student at the UNIVERSITY of TEXAS, to which institution we also express our regrets. A reproduction of the entry is shown above. For more complete details, including judges' commentary, see April Issue

From Excevation to Trim

(Continued from page 89)

man Square development. All houses on corner lots have fireplaces and breezeways, which create a secluded patio. Every house has a two-car garage, either attached or detached. Lots have a minimum of 6,000 square feet. The project has paved streets, concrete curbs, sidewalks, sewers, and asphalt driveways. Front lawn and shrubs are planted, and clothes poles and incinerators installed.

Prospective buyers have a choice of interior paint colors and floor coverings, and if they specify may have tile in bath and kitchen and stainless steel drainboards. The first buyers in a block are given a choice of approved exterior colors and subsequent purchasers may select colors which harmonize with the others. A choice between asphalt shingle and Dolomite granule roofs is also given.

Other features of the homes are Waste King Pulverators, enameled kitchen finish, electric bath heaters, door chimes and select oak floors. Sale prices had not been definitely determined, but it was stated that the two-bedroom homes were expected to sell for not more than \$8,250; three-bedroom not over \$8,950; and those on corner lots with fireplaces and breezeways, \$9,650 or less.

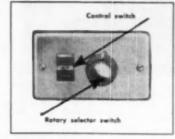
AMERICAN BUILDER

17



WIRING NEWS

A PERIODICAL DIGEST OF WIRING IDEAS FROM THE GENERAL ELECTRIC CONSTRUCTION MATERIALS DEPARTMENT



Master Selector Switch Increases Versatility Of Remote Control!

Here's the newest addition to General Electric's increasingly popular remotecontrol wiring system - an addition that makes practical a wide variety of new applications. Replacing separate ON and OFF controls for each circuit, this compact master selector switch provides instant, positive control of up to 9 different circuitsand, very simply, too!

To Control Individual Circuits

Turn rotary selector switch to the desired circuit and then press the control switch for ON or OPP.

To Control All Circuits

Merely press the control switch ON or OFF while rotating the selector switch through all nine positions

Plan to use it as a selling tool ... for unobtrusive bedside control of home lighting circuits... for sure, certain emergency light control in warehouses, hanks, office build ings ... for varying the lighting of display areas ... or wherever else one-point, multicircuit control is needed.

The G-E master selector fits all standard suntings for flush devices. See it at your local General Electric distributor's or check box (A) below.

Free Guide Speeds Box Selection

To make your next job an easy, certain one, General Electric offers free a

new switch and outlet hos chart. With this handy specification aid, you'll know at a glance the proper outlet, switch, or utility box for any wiring job.

Printed in color and carefully illustrated this new Box Buyer's Guide gives the dimensions of all standard boxes. It shows the number of conductors-by wire sizepermitted by the National Electrical Code for the various hos sizes and types.

Get your copy today-order some for your contractors, too-just check box (B) in the coupon.

PVX For Better Profit!

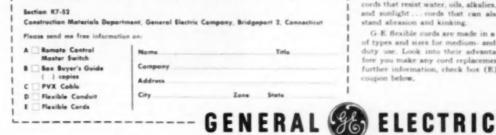
That's right, General Electric PVX# nonmetallic sheathed cable answers the problems of decreasing the time and costs of wiring -- without sacrificing either qualify or permanence.

When "roughing in" commercial or residential jobs, the light weight and small diameter of PVX pays off in faster handling. You'll like the easy way it strips clean for ready connection

In "finish wiring", the small-diameter conductors leave more working room in boxes. In addition, the bright colors of PVX insulation assure quick, certain circuit identification. Use it on your next job. Check box (C) if you would like additional information.

Can You Afford **To Save On Switches?**

Why gamble? Replacements and service calls often cost many times the small savings made on lower-grade switches. So, when your plans call for switches, insist on G-E specification grade switches.



The All-Purpose Raceway-**G-E Flexible Steel Conduit**

Here's an all-purpose receway that has all the advantages of a cable method of wiring. Yet, in installed cost, it compares favorably with other raceway systems. Available in long, continuous lengths, in many standard sizes, it has the ability to stand up under the most severe operating conditions

G-E flexible steel conduit is made of galvanized strip steel, which, if properly installed, provides an unbroken lowresistance path to ground. It requires no tools for bending or threading, and only a few simple fittings are necessary in its installation

General Electric flexible steel conduit saves time and money-its smooth interior surface makes wire pulling easy. For information on "flex" check (D) in the coupon

Tough Cords For Rough Jobs!

Whether it's for a powerful portable saw heavy-duty floor sander ... or light hand drill-you'll do well to get a hardworking General Electric flexible cord to keep it operating with uninterrupted power



All General Electric cords are built to absorb the rough handling and abuse customary at construction sites. There are cords for every purpose-cords that can take repeated hard knocks and flexing ... cords that resist water, oils, alkalies, grease, and sunlight ... cords that can also withstand abrasion and kinking.

G-E flexible cords are made in a variety of types and sizes for medium- and heavyduty use. Look into their advantages hefore you make any cord replacements. For further information, check box (E) in the coupon below.

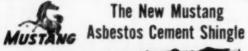


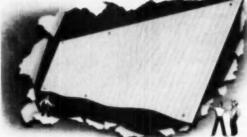
BUILD BETTER HOMES ... FASTER with SAFWAY Steel Scaffolding

To increase building profits, scaffold all your jobs with SAFWAY the only sory. Saves time in erection and dismantling . . . saves time in all stages of work. Affords maximum convenience and safety for the carpenter, mason and painter. Standard tubular steel members fit every inb efficiently.

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This new Mustang Shingle is whiter, too-much whiter! Sidewalls of fireproof Mustangs have all the glistening whiteness of sunlighted snow.

WATERPROOF New Mustangs shed water like a duck's back! A waterproof coating enables Mustangs to withstand weather. Each rain washes aff dirt.

WRITE TODAY for free Descriptive Folder and Name of Nearest Dealer and



Rammed-Earth Building

Improved in Australia



MODERN Australian pise house built for Sydney. New South Wales, businessman. Portion of exterior, rendered in a stabilised earth composition devised by an engineer of the Commonwealth Experimental Building Station, how shown no signs of cracking

ODERN homes are being built in Australia in one of the world's oldest building naterials—rammed-earth, or pisé de terre. But the ingenuity of officers of the Australian Commonwealth Experimental Building Station has brought new methods to speed up the ancient craft.

Rammed-earth construction differs from adobe, another very old system of building, in that it consists of slightly moistened earth compacted into walls by tamping down inside a wooden frame, so that the whole building is "monolithic," whereas adobe consists of puddled-earth bricks sun-dried, and built up brick by brick.

Pisé buildings are in existence in all the states of Australia, but by far the most are in the largest state, New South Wales. The 1947 census showed 2,899 dwellings in existence in this material in Australia—2,320 of them in New South Wales.

Between 1933 and 1947 over 300 homes had been built in pisé in the six States. More are being built now--one, at least, of modern design, in the outer Sydney suburb of Baulkham Hills. The local bowls club at Denistone, another Sydney suburb, has plans ready for the erection of a fine club house in this material.

Many of Australia's rammed-earth buildings have been standing for decades. There is a church at Leeton, in the

(Continued on page 184)



TWO new inventions of the experimental station designed to speed-up building in pize, demonstrated by station workman. Presumatic tumper (left) gives (asier, more efficient results than a hand implement. "Crawlerform" (right) uses clamps instead of old method of bolting through the pize, and is equipped with rollers to facilitate its movement from completed to a new section Build Sales Appeal into your new homes . . . With

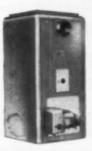
DELCO-HEAT Conditionairs

. . . engineered by General Motors especially for today's popular sized homes!



OPC Conditionair

Oil-fired Conditionair-designed expressly for utility room or closet installations. Three sides of the unit are clear of flue outlet, controls, etc., for easy installation in recessed areas. Cold air may be returned at either side or at bottom of blower unit. Capacity 75,000 BTU's.



OVC Conditionair

Compact, efficient, oil-fired Conditionair. Two-stage Delco-Heat vaporizing oil burner gives clean, economical combustion. Ideally suited to today's smaller homes with basements. In gravity systems, the circulation of warmed air results in an efficient, economical automatic heat. Capacity 66,000 BTU's. Also available with blower-filter unit – capacities from 73,500 BTU's.

VERAL MOTORS

Using radiant heat? Delco Heat boller answers small homes needs!



The Series "S" oil-fired Boiler is perfectly suited for tadiant heating systems-or coverational steam or bot water systems-in populatsize homes. The location of the oil burner and controls on the front of the unit makes it ideal for installations in restricted areas or utility rooms.

Delco Heat's new low-cost Conversion Oil Burner



The Series "E" Conversion Oil Burner is a true General Motors value at an outscandingly low price Has Delco-Heat Rigidframe Motor, precision-built fuel pump, stainless steel noz. zde, large capacity centrifugal-type fan, heavy duty moisture-proof transformer and scientifically designed rurbulator.

New Reverse Flow Conditionair

Designed for the revolutionary new low cost, warm air-radiant "perimeter heating systems! The Delco-Hear OPC-75HR is an oil-fired Conditionair in which air is forced downward over heat exchanger to be distributed from bottom of Conditionair. In "perimeter" systems, this provides both usady radiant beat and responsive forred warm air beat?

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It Pays to Give Home Buyers Lawns that Stay Beautiful DON'T SKIMP on the LAWN SEED Sow WHITNEY'S Sow Super-SEED Refined

Whether you sell your homes completely landscaped or make the lawn after the owner has moved in, you can't afford to skimp on the lawn seed, and run the risk of a disgrantled owner.

WHITNEY'S Lawn Seed is super-refined to remove weeds and chaft. And it's tested and proved for high germination. In other words, it's dependable. It grows lawns that are thick and sturdy.

Write for full information about WHITNEY'S Lawn Seed -- we have a mixture for your requirements.



Heavy duty, well-engineered garage door hardware. Result: a quickly installed, easily operated, overhead door. Designed to insure customer satisfaction.

Standard set fits any opening up to 9' wide x 76' high when doors do not exceed 275 lbs. Other sets available for openings up to 10' wide x 10' high.



Remmed-Larth Building . . .

(Continued from page 183)

Murrumbidgee River irrigation area, still in excellent condition after 40 years. Other buildings in various parts of Australia have been standing for nearly a century. Many farmers and building contractors who recently saw a demnounced their intention of using it for future construction. Broken Hill, Corowa, Cootamundra, Junee and Temora in New South Wales, and Eltham in Victoria are among the centers where pise is popular.

Earth as a building material has these advantages: it costs nothing, does not need to be transported to the site, requires less skilled labor in the work of construction than other materials, and provides a dwelling that is cool in summer and warm in winter.

Its worst foe, of course, is water, and apart from improving building methods, research at the Commonwealth Experimental Building Station has been concentrated on the treatment of the exteriors of earth-built houses to make



FOUR VEHICLE garage built of rammod-earth at Australian experimental station. Side and back walls are rendered with bituminous emulsion to protect earth surface; front pillars are comentfaced; and root is covered with bituminous sheeting

them resistant to weather and to make the composition of the walls themselves more stable.

Experience has shown that most ordinary earths are suitable for pise, or may be made so by admixture. The best consistency, however, is about 30 per cent of clay by loose volume (including silt and loam) and 70 per cent of sand (including gravel and other granular materials), with a monsture content of 7 to 9 per cent.

The reverse is the case with adobe construction, in which the clay content must preponderate, and the material to be made into the adobe bricks must be of the consistency of thick mud.

Binding of the material in pise into strong, solid wall is brought about by the mechanical interlocking of the earth particles through compaction.

Chemical action and the pressure of thousands of tons of earth produced most of the world's rocks. The ramming of the earth used in pisé, plus a similar action, produces the approximation of soft stone which forms the monolithic building.

Information on rammed-earth construction is exchanged with India and South Africa by the Australian Commonwealth Experimental Building Station. The Station has also been aided in its researches by material from Britain, the United States and Russia, where extensive rebuilding of war-wrecked cities is being carried out in pisé. Correspondence on the unthod is carried out in pisé. Corcountries such as New Guinea. The Station is the centre (Continued on page 186)



doubly durable ...





64 Truscesa Series 1.18 Double Hung Steel Windows in G. W. McIninch residence, Omaha, Nebracha, Steele, Sandham & Steele, Architects.



Irmscon Series 13th Double-Hong Steel Windows in Garth Woods Apartments, Scaridale,

doubly economica

Truscon specialized formed-steel frame and sash construction builds high strength into these steel windows of pleasing design. This form of construction assures structural rigidity, and freedom from depreciation. Truscon Double-Hung Steel Windows have fingertip control with motor type spring balances, complete factory weatherstripping in stainless steel, solid bronze lever lift handles and sweep lock. And, of course, there are the traditional Truscon Steel Window features of no warping, sagging, binding or sticking. No rotting and necessary replacement. For residential and commercial use, in a wide range of types and sizes. Free illustrated literature on Truscon Series 138 Steel Windows on request.



PEER Book on Truccom Sheel Windows, Write for H. The Truccom Steel Company Manufactures a Complete Line of Residential Double Hung Windows . Residential Cosements . . Security and Busometr Windows . Screen and Sterm Stah. Moral Lath Products . . Industrial Steel Doors . . Coal Churts Doors . . Sheel Lintaly . . Concress Bars . . Weided Sheel Fabric. TRUSCON STEEL COMPANY Subandony of Republic Start Comparations YOUNGSTOWN 1_OHIO Warehouses and sales offices in principal offices

MAY 1950



This photo shows continuenus streams of water being directed from the top parts two brick panels, one of which has been treated with CRVSTAL.

This is the other side of the panels. The CRYSTAL-treated panel is on the left.

What a Difference! After 2000 hours of continuous exposure to water, the CRYSTAL-treated panel is completely free of the waterlogged appearance and efflorescence so evident in the untreated ponel.

This is an object lesson in what invisible CRYSTAL, with its amazing pore-coating action, can mean to the beauty and soundness of your buildings for a period, as accelerated weathering tests have proven, of many years, with just one application. Waterproof man made masonry and most natural stones with CRYSTAL.



tion action. Duplicates the craftsman's natural back-andforth motion of hand block sanding and rubbing. STRAIGHT-LINE action sands up to moldings. Does not

sand cross grain, cut swirts, eye winkers or other hard to cover abrasive patterns. NO HAND CLEAN UP WHEN YOU USE AN EASY.

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 other new features.

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DETROIT SURFACING MACHINE COMPANY

7458 W. DAVISON . DETROIT 4, MICH.

Rammed-Earth Building . . .

(Continued from page 184)

of research in the British Empire on methods of building in hot climates.

Founded in 1944 by the Federal Department of Works and Housing the Station now has a staff of 60 which includes architects, engineers, physicists, model builders and experts in other sciences. It extends over 40 acres of bushland at Ryde, nine miles from Sydney. It advises Federal and State governments on building projects, and publishes periodical documents which are eagerly sought by those connected with the building industry.

For two years, G. F. Middleton, architect with the Station, has been concentrating on pisé construction. A series of experimental walls has been erected in the grounds, capped with concrete to protect the wall tops, and the effects of weathering on walls of plain rammed-earth and of rammed-earth finished with various materials are being observed.

Experimental buildings have also been erected for tem-



G. F. MIDDLETON, in charge of piso research at the station, shows experimental wall sections used to test weathering. They stand on concrete bases, are capped with concrete to protect walltage, and have been treated with a number of different substances.

perature tests and to test various renderings and treatments. Methods in use in other countries have been studied together with practices which have grown up in Australia. Those who have used the system for many years have been consulted. The condition of pise buildings erected decades ago has been studied to complete the picture.

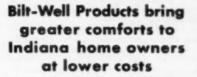
Already the Station has produced two new inventions to speed up pisé building. Methods of stabilizing the actual building material, as distinct from rendering the outside surface for protection, are for future study.

Though earth for construction is as cheap a material as could be imagined, and skilled labor is less necessary for pise than for brick or other orthodox materials, the method is fairly slow, so the saving in the cost of actual materials is somewhat offset by the apreading of the wages bill over a longer period. Additional economy is gained, therefore, by speedier methods.

Traditional equipment used for rammed-earth-construction is a wooden form placed in position on the foundation to mould a section of wall. Inside this mould the earth is' tamped down until it is hard enough to ring with each blow.

The form resembles a long, low box with open top and bottom, the sides bolted together with long bolts. Completion of each section rammed is followed by the dismantling of this form, moving it along to the next section to be built, and rebolting it into its new position.

(Continued on page 188)



Above picture shows a part of one of Indianapolis, Indiana's newest housing projects being equipped throughout with Superior Windows and other Bill-Well Woodwork.

The General Contractors are Bohannon and Maore. Bilt-Well Woodwark is being furnished through Home Lumber Ca., Danville, Ind., and supplied by Adams-Rogers, Indianapolis.



BILT WELL

Anticipation (FO I ITA I UTA

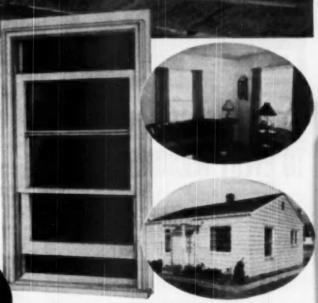
Other Bilt-Well Products are:

The Bilt-Well Line: Superior Unit Wood Windows + Exterior & Interior Doors + Entrances & Shotters + Chi-stite Casements + Carr-dor Garage Doors + Basement Unit Windows + Lowers & Gable Sash + Breakfast Nooks + Combination Doors + Sereens & Storm Sash + Corner (China) Cabinets + Glidor Cabinets + Ironing Board Cabinets + Mantels & Telephone Cabinets + Multiple-Use & Linen Cabinets + Stair Parts.



MAY 1950

Bill: Wall Stare Sash and Screen Units are optional equipment; an invatment, however, that pays large dividends year ofter year.



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Rammed-Earth Duilding

(Continued from page 186)

This process is repeated around the circuit of the wall to be built, and the partition walls as well. Then the form is erected on top of the built section, and so the ramming goes on until the requisite height is reached,

Removal of the form from one section to another is effected by withdrawing the bolts which go through from side to side and dismantling the formwork to be erected in position for the next section. This is difficult when the earth is rammed hard.

The Station has evolved a new type of form, the sides of which are retained in position by overhead clamps instead of through-bolts. Release of these clamps frees the sides of the form, which come away from the pise without any trouble, and without leaving bolt-holes.

In addition, the new form is fitted with rollers to facilitate movement, without dismantling, from built to unbuilt section. One roller moves along the foundation or previously completed level of the wall, the other, at a higher point, moves along the top of the section from which the form is being released.

Because of these rollers, it has been named the "crawlerform." It produces a wall section 5 feet long and 15 inches high, compared with the 6 feet by 30 inches of the traditional form; but in tests the new form took one man eight minutes to change its position, compared with the 132 hours which it took three men to dismantle and re-erect the traditional form.

The second invention to speed up building was a mechanical rammer to replace the manual rammer which has been used by pise builders from time immemorial.

The basis for the new equipment was a pneumatic tamper designed originally to compact backfill for trenches, or tamp sand into moulds for heavy foundry work. It weighed 23 pounds, had a flat-faced circular, 2 pound hammerhead of aluminium, 3 inches in diameter.

At the Station the tamper was adapted by fitting instead a 10 pound flat-faced hammerhead 6 inches square. Rods were fitted to prevent rotation of the head; piston speed and pressure were reduced to the needs of its new task. The remodeled implement weighed 31 pounds.

Three men were put on each of two jobs of building test walls, one group with a manual tamper, the other with a pneumatic machine. The manual operators took three hours to build their wall, the pneumatic operators only 11/2 hours. A production speed of 13 cubic feet a man-hour was attained.

Investigations showed that the mechanical rammer gave a wall of increased strength, produced a pisé of greater regularity and finer texture, and compacted it more densely.

For the guidance of the many inquirers about building in pisé, Middleton has published for the Station an interim report embodying information from British and American sources, supplemented by the Station's own experiments and information gained in areas of Australia where pise building flourished.

"It will be seen," he writes, "that the rules followed are of the rule-of-thumb type developed over the years by trial, error and experience

"Some effort will be made by the Station to develop soundly based rules capable of wide application for the choice and testing of soils and mixes and the determination of suitable water content.

The booklet contains many practical points of guidance, and quotes practices which have grown up in Australian pisé centers.

In Corowa, for example, builders keep window and door

(Continued on page 190)

CHASE COPPER TUBE RADIANT HEATING goes into still another group of homes!

Coils of 60 and 100 foot lengths that eliminate extra connectionsflexible, small-diameter tube that bends easily without special toolssolder-joint fittings that make tight joints...these are just a few of the reasons why builders all over the country are turning to Chase Copper Tube for their radiant heating installations.

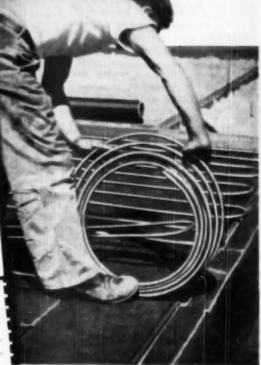
> The installation shown is in a group of 90 houses in the East, Nome furnished on request.) Chose Copper Tube was supplied by Mayer Malbin Co., Inc., Long Island City, N.Y.



-

City

WHEN your plan radiant heating installations, remember that Chase Copper Tube can be installed easily, economically. Its light weight simplifies the handling of the long coils. Its small diameter adapts it perfectly to ceiling installation in the normal plaster depth. And ... Chase Copper Tube is available for immediate delivery!





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Rammed-Earth Building

(Continued from page 188)

heads at the same level, and construct a continuous reinforced concrete lintel completely round the building. To protect exterior walls, they "key" cement mortar rendering by scoring vertical and horizontal lines 6 inches apart all over the surface, sink conical holes at the intersections of these lines, then drive spring-head roofing nails into the holes until the heads are level with the wall surface. The plaster is forced behind these nail-heads when the wall is being rendered.

These are local practices. The report also lists many helpful points of guidance on pisé building generally, such as footings for the walls, width of the eaves, pitch of the roof, rendering materials.

Reinforced concrete strip footings are recommended as a base on which to build the walls. These should be carried up to a minimum of 9 inches above ground level to protect the wall against erosion by storm-water and rainsplash, and even higher where rainfall is exceptionally heavy and flooding is possible.

Walls should be 12 inches thick except for very large buildings and should be set on flexible damp-proof courses and capped with a moisture-resistant covering such as an inch-thick layer of portland cement mortar before the wall plates are placed in position. Lintels should be of reinforced concrete with a bearing surface of at least 9 inches on either side of the openings.

Under ideal circumstances, a good pisé wall, when hardened and matured becomes harder with age and some pisé walls have survived centuries of exposure. But the risk of damage for lack of an inexpensive waterproof coating is not worth while when there are inexpensive ways of rendering the exterior to protect it from water.

Centent mortar rendering is satisfactory, provided that it is keyed well to the wall. A cheaper method is to paint it with clear raw linseed oil or thin paint, brushed well in at a rate of a gallon to 100 square feet. Three days later a priming coat of ordinary house paint is applied, three quarts to 100 square feet.

Farm buildings, it is suggested, might be treated more economically with hot tar, a hot asphaltic-based solution, or cold bituminous emulsion. Lime washes, cement washes, lime tallow, waterbound paints and similar coatings are not suitable for exteriors because they do not give sufficient protection against moisture penetration.

Traditional pitched roof design is usual in Australia for pisé structures, except that eaves are made wider—3 feet to 3 feet, 6 inches—to give protection to the walls. Boxed eaves with ventilation in the soffit are recommended.

With such wide eaves, says the report, it is desirable to keep the roof pitch as low as possible, lest the eaves project too far down the face of the building and interfere with the natural lighting of the room.

The modern home at Baulkham Hills, already referred to, has been built with a flat roof; but here, too, a wide projection has been made to protect the walls.

Plumbing Indoors 50 Years

Although the prototype of the modern enameled cast iron bathtub was first made around 1870, the really significant progress in the plumbing industry hus been made since 1900, the Plumbing and Heating Industries Bureau said in reviewing a half century of evolution in the plumbing industry. It was only in the last 50 years, the Bureau pointed out, that plumbing has moved indoors and the bathroom has won acceptance as an essential feature of a modern dwelling unit. The new 1950 CHAMPION Homes



QUALITY THAT WINS DEMAND . . . CHAMPION Homes withstand all climatic conditions because of rugged construction and quality-tested materials! They are available in 3 sizes and 30 attractive designs, which supply architectural variation in large group developments! The enthusiastic demand of Homebuyers across the nation means CHAMPION Homes bring SALES TO YOU!

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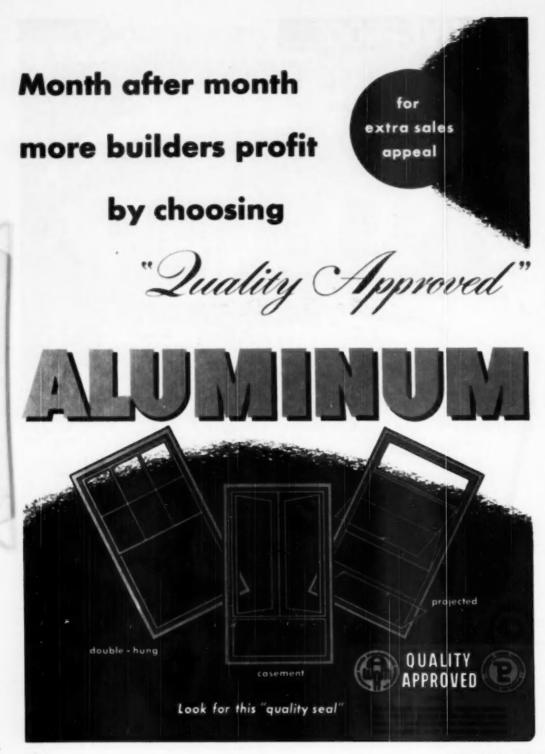
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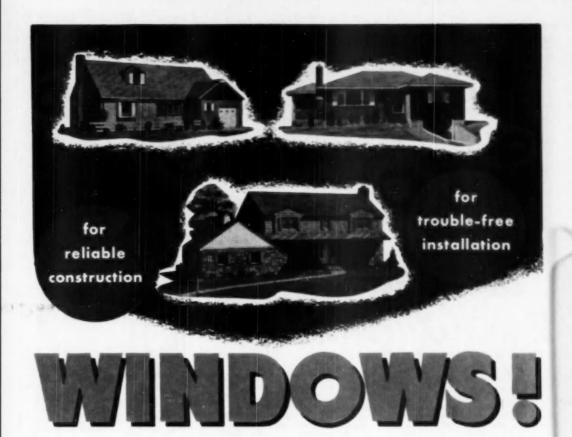
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- * complete insulation
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Have you noticed that home-buyers are becoming more and more "choosey" these days? More value and quality conscious?

Good reason for you to be that way yourself-especially when selecting windows!

Every day more builders are finding that when you select Quality-Approved aluminum windows there's no question of quality. You know it's there—built in!

More important, your customers will know it! And they'll like the fact that you're a builder who takes no short cuts on window quality. The "Quality-Approved" Seal on your windows means minimum air infiltration, strong sections, sound construction, good materials. There will be no painting, no rust, no sticking or warping for the life of the window!

But this bright red seal means more than that! Hundreds of builders can tell you it means sales appeal! Try it on your next job and see for yourself.

You can get these windows in all standard types for all types of building. You can get all the facts from any Association member, from Sweet's Builders' File (Section 3c/1a) or by writing to Dept. A.

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INDUSTRY BRIEFS

C. H. FOULDS, Perfection Stove



Co. vice president in charge of sales, has announced a revamping of the firm's sales diviwith two sion. major shifts in personnel. Named general sales manager is Leslie Bushfield, for the

past year sales manager of the range and heater division. Herbert C. Erhard, who has headed the Acorn-Oriole sales division since it was acquired by Perfection last year, replaces Bushfield as sales manager in charge of ranges and heaters. The Acorn-Oriole division will be integrated with the Perfection range and heater division.



Allied Building Credits, Inc., has opened a new branch office in Omaha, Neb., R. A. Peterson, president, announced recently. Named as manager of the new unit is E. E. Nelson, formerly of the Salt Lake City branch. Nelson has

E. E. Hala

been affiliated with the firm since 1940, except for a period of service in the armed forces.

* * *



Kimberly - Clark Corp., Neenah, Wis., were announced recently by the firm's sales vice president, John R. Kimberly. A. G. Sharp has been named general sales manager and J. B. Catlin, general

A. G. Sharp

merchandising manager. Sharp also acts as assistant to the vice president. Each has been associated with the corporation since 1930.

* * *

Three new appointments have been made by the Insulite Division of Minnesota and Ontario Paper Co., M. C. Fairfield, Insulite sales manager, has reported. Named sales representatives were: central Indiana. Garth R. Marine; Montana, northern Wyoming and the western section of North and South Dakota, Chester B. Knapp, Jr. O. G. "Ollie" Norbeck has the territory in North Dakota and northwestern Minnesota.

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Bie new Inselecter of Lopapedics center in available control of available control of histopic control of histopic control of administratives hackforg A bablio of 1750 exposes of Exdension Dubi Constraint Budgetonic Dubi Constraint Data available of the ready

WIND CAN'T PICK THESE "LOCKS"



DUBL - COVER AGE TITE ONS are not just stronger and double thick-their patented design results in an amazing double ply roof - two roofs interworen in one - with triple coverage in many parts. And

for extra re-enforcement each interlocked shingle is nailed down solidly in four places. DUBL COVERAGE TITE-ONS are truly wind proof.

INTERWOVEN APPLICATION

The man is holding a group of DUBL-COVERAGE TITE-ONS arranged just as they are applied on the roof (underside view). Note that the shingles do not come apart even when hanging vertically without nails! When interlocked and nailed down on the roof, they stay where they belong!





PATENTED DESIGNE TITE.ON Shingles are Ruberoid-originated and patented. They have an 18 year background of proven performance.

but first they studied TITE-ONS**

the amazingly wind-resistant Ruberoid interlacking shingle

On the rolling plains of Kansas where the wind blows free and the ominous black tail of a twister occasionally makes an appearance, it pays to invest in a roof that will hang on for dear life. The Institute of Logopedics wisely selected Ruberoid Dubl-Coverage Tite-On Shingles to protect its fine new \$2,000,000 speech correction center covering 40 acres on the outkirts of Wichita.

Tite-Ons were specified for the Institute by Builder's, Inc. . . . but Tite-Ons really sold themselves! Mr. L. R. Mollohan, manager of the Rock Island Lumber Co. first sold Dubl-Coverage Tite-Ons to Builder's. Inc. for several Four-Plexs in Southeast Wichita. In June, 1947, these roofs were put to a severe test when Wichita had a very heavy windstorm that ripped up other roofs but failed to disturb Tite-Ons. Besides providing the utmost in storm protection, self-locking Tite-On Shingles are fire-resistant, attractive and provide a minimum of two thicknesses over the entire roof.



MAY 1950





A QUICK glance over book publishers' current lists indicates that there are today several hundred books on the market that in one way or another deal with the broad and fascinating subject of electricity. There are, in fact, just too many books on electricity, no matter how fascinating they are, for the average builder, contractor or carpenter to be able to judge intelligently just which one of these hundreds of volumes best suits his particular needs. As one way out of this dilemma, we would like to recommend a couple of popular titles, both of which are on the slim side, that have met with wide approval in the building trades. They seem to supply just the electrical information that the average builder is looking for.

INTERIOR ELECTRIC WIRING AND ESTIMATING

By Uhl Nelson Dunlap. Third Edition, 354 pages, illustrated. 535 inches by 85, inches. American Technical Society, \$2.75 No. 28 in adjoining volume.

First published a number of years ago, but today in its third up-to-date edition, this book is an old stand-by that has proved its worth beyond dispute. It is our guess that what builders like best about it is its easily understandable "howto-do-it" style that simplifies the problems of house wiring and estimating not only for the beginner but also for the more experienced craftsman. Contractors especially will profit from that section of the book that tells how properly to estimate the labor and materials that will go into a house wiring job.

Other useful chapters contain a wealth of practical information on service wiring; knoh and tube wiring; cable wiring, conduit wiring materials, tools, methods; and apartment and factory building wiring. All of which combine to make this both a fine text and ready reference book which we feel a builder can rely on with confidence.

WESTINGHOUSE HOME WIRING HANDBOOK

By A. Carl Bredahi, Second Edition, 134 pages, illustrated, 516 inches by 8 inches, Weninghouse Electric Corporation, \$1,00, No. 29 in adcenting column.

It might be suggested that the company that publishes this little 134-page work on the fundamentals of electrical wiring has something more than a detached interest in the subject. The obvious answer is that if other suppliers went to the same pains to provide useful information to builders and consumers in the same handy fashion that the Westinghouse people have there is no question that both the companies and the users of their products would benefit considerably.

Here in eleven short chapters is excellent data on electrical equipment, outlets, circuits, control centers, circuit protection, communication systems that include signals, telephone and radio, specifications, estimating costs, terminology and tables together with a clear explanation of the company's own Four Despress of Electrification which gives the builder a quick means of selecting a system of wiring that will satisfy a given installation.

This book is not an all-inclusive treatise on the subject of wiring nor is it intended to be. Rather it is a thoroughly useful guide for planning wiring of popular-priced homes, which is just the kind of information that most builders are looking for.

A SPECIAL

Here's an easy way to get new essential information that will help you increase your income. Every volume a standard work by leading authority. Remember—it's the informed builder who is the successful builder.

ESTIMATING

- THE BUILDING ESTIMATOR'S REFERENCE BOOK and Veer Packet Estimator (not sold separately). By Frank R. Walker. Contains latest estimating and cost data an everything that goes into house construction. Most complete complication of estimating and cost data available, \$10.00.
- THE BUILDING COST CALCULATOR. By John R. Smith. A system for arriving at building construction cost by use of schedules giving cost of standard units of construction at varying costs of labor and materials. 310.50.
- SIMPLIFIED CARPENTRY ESTIMATING. By J. W. Wilson and Ciell M. Rogers. Everything needed to "take-off" a bill of materials from set of plana and specifications for a frame house-with many helpful quick-reference tables and shortcut methods that simplify the work. \$3,30.
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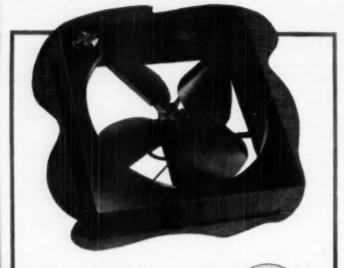
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MAY 1950

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The Emerson Electric Mfg. Co., St. Louis 21, Mo.



Low Upkeep ...

(Continued from page 158)

at rear, and in constructing the kitchen cabinets. Two 152-inch meat cutting boards are installed in the kitchen cabinet countertops which are Formica, as is the backpaneling above them.

A special cabinet next to the range in the kitchen encloses a serving cart. The underside of the cabinet above it



FIELDSTONE fireplace has oak mantel

holds a folding knife rack operating on friction hinges.

The china cabinet separating the kitchen and dining areas loads from both sides, as does the lower section, including the silverware drawers. Both kitchen and dining rooms are illuminated with flush fluorescent ceiling fixtures. The refractory table in the dining room was also built in the owner's mill.

The paneling in the walls and in the ceiling of the front porch are cypress as are the cabinets which are built into each side of the fireplace.



GRILL cabinet shelves are heatproof stone

One is a wood bin serving both the living room and the porch. The second outer calinet encloses three drawers each on the porch side and on the living room side.

The living room fireplace is equipped with a Heatilator. The porch unit has a Handcock grill installed in it. The extended cabinet shelves and mantel of the porch fireplace are of flagstone so that hot uten-

(Continued on page 200)

Notice how <u>more</u> folks notice heating <u>more</u>?

She had been impressed by the modern kitchen. He had grinned as he surveyed the spacious recreation room. But, it was when both eyed the Bryant automatic gas heating installation that they knew this was their house... a quality home throughout!

In most every part of the land, there's growing excitement about automatic gas heating. It is the blooming of an idea which Bryant planted nearly a half century ago with installation of the first home heating truly designed to "let the pup be furnace man."

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Bet your bottom dollar that Americans want the *best* in automatic gas heating . . . the kind you give them when you specify or install equipment bearing the Bryant nameplate.



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Resplices Fig. learn Consist Maximum permitatible oper sting furnerstature 200 C ofen nin 200 amp Circuit

Its higher amperage rating under the National Electrical Code affords greater current carrying capacity.

Smaller conductors, smaller sizes of conduit and fittings, and lower labor cost-all are available to you by proper application of Paranite Paratherm (Type RH) Wire and Cables.

All Paranite products are made under the watchful eye of S. Q. C. - Statistical Quality Control.



Low Upkeep . . .

(Continued from page 198)

sils may be placed on them. Maple cutting boards are also set into this mantel. The living room mantel is solid oak, 255 by 14 inches and 13 feet, 4 inches long.

As an inspection of the photographs and plans reveals, ceiling cabinets are numerous in this home. They are used in the utility room which also has a



SPRIGHTLY furnishings in green land yollow harmonize with warm tones of maple panels

maple work bench with cabinets below. This room also has a closet designed especially for storage of fishing rods and tackle, raincoats, and boots in addition to providing storage space for regular household items such as ironing boards and mops.

Both porches are screened and equipped with canvas covering that can be lowered instantly during inclement weather.

Furnishings in the living room are in colorful green, white and yellow. The kitchen is decorated with canary vellow. The wood panels were finished with a 50-50 white shellac solution. sanded, coated a second time, sanded and rubbed with steel wool to remove highlights, and finally coated with butcher's wax.

The floor of this house is slab concrete, 4 inches thick, poured over a 4-inch slab of a zonolite-cement mix. Two coats of Armstrong's asphalt cement, saturating a layer of 30pound felt, hind the asphalt tile to the concrete floor. Four inches of zonolite also furnish insulation in the ceiling, finished in 16 by 32-inch NuWood panels

A Coleman oil burning floor furnace with thermostatic controls, installed in the living room, heats the house.

The plans were executed by the National Plan Service, Inc. Gail H. Cole aided in designing the fireplace. bedroom, and kitchen. The builder was Vernon Barnes, Elk Rapids, Mich, who used general materials furnished by the Morrison Lumber Company.



PARA THERM



The Finishing Touch of Quality for Colonials, Ranch Houses, Game Rooms

Old Guilford Forge reproduction hardware and Early American lighting fixtures are now available to build ers for use in homes where the "touch of distinction" is required. Not just another black iron line, Old Guilford Forge offers a complete complement of faithfully handreproduced hardware, with lighting fixtures in pewter, brass and wrought iron to match

Despite their quality, Old Guilford Forge repro ductions are sensibly priced - well within the budget of the moderate cost home. Custom work in ornamental iron and hardware is invited. Write for quotations.

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fold-down type sink frame

How to install the NEW CHROMTRIM



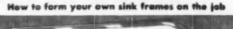


Align CHROMTRIM sick to ever opening Embed it in Wernco waterproof adhesive and screw down per monently. Fromes are pre-drillad with soon tersenk holes. Use screws supplied

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Fold down tip over material, storting with wood block and ham mer Continue with block and hand pres sura until adhasive squeeses out at edges. Clean off escess adhe size immediately

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Use CHROMTRIM straight face nosing, edging or folddown type nosing. Slit the flange or underface shapes as shown, to form rounded corners. Saw one slit only for square corners. Write in for complete information.

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\$600,000 'Park and Shop' Center Being Built in Chicago Subdivision



SKETCH of "Park and Shop" center being built in Chicago

Construction was started recently on the first unit of a \$100,000 "Park and Shop" commercial center with parking space for 400 cars in the Merrionette Manor development on Chicago's south side.

The shopping center will be the final unit in the fouryear postwar development of the 542-unit duplex project by the J. E. Merrion Co. of Chicago. The subdivision was named a national winner in the 1949 NAHB land planning competition. Merrion said that the center, scheduled for completion next September, will be the first completely integrated and planned "Park and Shop" unit in the city.

The development will ultimately include a chain department store, a large food mart, bakery, drug store, variety store, hardware, dress, shoe and other shops and gasoline service station facilities. A feature of the initial unit will be a completely air-conditioned medical center with 11 suites.

Buildings for the commercial unit were designed by Raymond P. Gregori, architect. Site plans were prepared by William A. Dean, town planner.

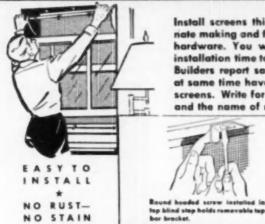
Approximately 38,000 persons live within a two-mile radius of the shopping center. In addition, it is set back from and faces 95th St., a heavily-traveled arterial highway.

Participating in the ground-breaking ceremonies were Harley V. McNamara, president of the National Tea Co., which has signed a 10-year lease for a food mart; Alderman Emil V. Pacini of Chicago; and Teresa Giorgian, "Miss Chicago" of 1949.



ON HAND for ground breaking ceremonies on first unit of the \$400.000 "Park and Shop" commercial center in Merrionstie Manor were (from left) J. E. Merrion, president of the J. E. Merrion Co.; Howard M. Landau of Landau and Perlman, rental aquats; Teress Giorgan, Miss Chicago of 1949; Raymond Gregori, architect; John Newberg, Merrion Co. construction superintendent; and William A. Dean, site planner, "Miss Chicago" spoded the first earth

KEYSTON FRAMELESS TENSION CREENS



(ALL ALUMINUM) Install screens this new modern frameless way and eliminate making and fitting screen frames, painting and outside hardware. You will not only save money but cut screen installation time to a minimum this modern Keystone way. Builders report savings up to 25 minutes per window and

at same time have given home buyers the finest in insect screens. Write for new installation and measurement data

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Catch at sill ongages sill flature. Note that flature is easily adjusted for proper lansion

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HELPS FOR YOUR NEW SALESMEN

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window and counter displays push the J. M. J. Rental Service.

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Service will be backed up by na-

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GET MORE TILE SALES THROUGH RENTAL CUTTERS

Now tile Deafors can give a complete rental service on tile cutters, can identify their stores with J. M. J. Tile Cutter Bantal Service and increase their floor troffic. Over a year of actual testing at the retail level proves large sales increase due to rental cutters.

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In field test, the J. M. J. Rental Cutter was out 90 per cent of the time. The J. M. J. Bantel Plan sutlines how you con prafit from this demand.

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The J. M. J. Rental Cutter makes in simple for the customer to do an accurate and any job of home tile laying. It helps the dealer show the customer how to do it.

CLINCHES SALES

Free use of the J. M. J. Buntel Cutter helps to clinck soles. Goodwill can be increased by including free use of the cultar where the purchase worrants it.

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MAKES YOUR

HOME TILE JOBS EAS





WITH right angle drive in low position electrician drills holes in difficult spot for installation of electrical condult

A new addition to the power tool field is a three-speed, right angle electrie drill, manufactured by the Milwaukee Electric Tool Corp. and designed for drilling around corners, pipes, conduits, and other obstructions-and between 12-inch center inists.

The unit consists of a standard drill with a right angle drive attachment. This drive houses a versatile, integrated gear unit that boosts the chuck

New right angle drive provides

three speeds for Milwaukee drill

speed 50 per cent in one position and reduces the speed 44 per cent when this position is reversed. The drive fits six Milwaukee drills, models .S-214, S-256, S-238, BF-312 (some exceptions), 5-412, and S-212.

A special tri-speed kit is being marketed by the Milwaukee Electric Tool Corporation for contractors. The basic drill in this kit is the S-412 with a 14-inch chuck capacity and powered by a 115 volt, AC-DC, 60-cycle, Ja horsepower motor. The three speeds offered are 300, 450, and 675 spre. 450 rpm being the speed of the basic drill. The variety of speeds makes the unit adaptable for drilling large or small holes in wood, ceramic, sheet metal, glass, and stone compositions.

The angle head is clamped to the electric drill with a sleeve, forming a solid, single unit. The drill and the angle head spindles accommodate any 15-inch-20 threaded Jacobs chuck or threaded bits. A sturdy side handle can be adjusted for right or left hand operation, or removed. Its 360 degree adjustment permits attachment any-

where on the exposed collar of the drill or on the right angle drive.

Turbine fans provide controlled ventilation throughout the aluminum housing of the drill. The triple gear train increases torque and protects the motor against overload. Ball and roller bearings reduce wear to a minimum.



CONVENIENT handles and special bit of **BAD** drill aid worker installing insulation in old home





The Wallace No. I Radial Saw is specifically designed for

ou. It is trailer-mounted, for portability. Exclusive angulator for rafter soming alternately cuts plate and plumb angles with one set-up and one handling of material. High spindle speed gives faster, smoother saw cuts better

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MAY 1950

205

Kohler Co. Remodels New York Showrood



VIEW of Kohler showroom from outside

The Kohler Co. showroom, Long Island, New York, has recently been remodeled to include the latest developments in decoration and plan, with backgrounds built to simulate the walls and floor of hathrooms and washrooms. Each setting has been studied to offer a practical and interesting selection of background colors

The showroom contains eight displays of bathroom and washroom sets in various price brackets. Four of the sets show fixtures in special Kohler colors-peachblow, spruce green, tuscan and cerulean blue. The remainder are in white with backgrounds in color

On the halcony level is a display of Kohler enameled sinks on metal cabinets. These range in size from the large Wilshire with two basins and two drainboards to the single basin ledge-type Delafield, Boilers for home heating and electric plants for independent electric service are also exlubited on the balcony.

A section is provided where visitors may confer with architects and plumbing contractors. The showroom also houses the office staff of Kohler's New York branch.

Expand Facilities for **Tabricating Log Buildings**

Production capacity of the Brownlee Co. of Detroit, manufacturers of partially fabricated sectional log cabins, homes, camp and commercial buildings, has been doubled through expansion of three plants in Michigan. according to an announcement by the president, W. G. Brownlee.

Expansion of the Brownlee cabin and building division started late in 1948 with the purchase of two plants.



NEW BROWNLEE sportsman model cable on lake in northern Wisconsin for summer accupancy by Chicago family. Size: 16x20 inet

in Milan, Mich. These plants have been completely modernized and new facilities have been added near Houghton, Mich., where the firm has its own timber tracts, saw mill and log plant.

The Brownlee line consists of a number of standard designs, starting with a 16x20-foot "Sportsman's Cabin" and including seven larger cabins and homes, commercial and chub buildings and complete tourist and motor courts. All are built of white cedar logs, sawn through the center and factory-constructed in sections with doors and windows included. Knotty pine or other paneling interiors may be combined with the rustic exteriors.

In the design, half logs are deeply grooved to receive splines which join them in vertical panels.

Install



The Approved Garage Ventilation Equipment plicity that lends perfectly to appearance, economy of installation The method of exhaust gas removal bealth departs soutractors and out types of a ended by pulldie diffe 4 of systems to metall. Nothing



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The CMC Rodial Saw has long been formers among builders because in does everything faster, easier, butter: Comparement de rings (CAC III of 5-10 paracel, and the CAC and the CAC Rodial Saw is definitely taged fore are some of the advantinges of these new CMC moulding cetters.

- · SAFER-ma blades to come loose
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- · ONE-PIECE DESIGN ELIMINATES COMPLICATED
- AD JUSTMENTS.

To sharpon, grind anly lace of suffer as indicate



Nisers --- Pomps --- Holds --- Bumpever Carts



ABCHITECT'S drawing of new McDonald offices and warehouse

New Suburban Building Solves Expansion Problem

Lack of expansion facilities and parking space in downtown building prompt Joplin, Mo., wholesaler to construct modern plant at city's edge

A YEAR ago when the A. Y. McDonald Manufacturing Co., Jophn, Mo., found itself in a jouation familiar to many wholesalers located in downtown districts—insufficient expansion room and a parking problem as well they solved the problem by erecting a large new building on the city's outskirts.

The new plant, which contains a spacious showroom and a warehouse with more than 35,000 square feet of usable space, is located just off a trunk highway, has a railroad spur on the property and provides parking space for nearly 100 cars and trucks.

The showroom features bathroom and kitchen fixtures in homelike settings and serves as a planning center to which dealers are invited to bring customers who are building or remodeling.

The large warehouse space permits adequate storage of complete distributor's stocks, including power pumps, water supply systems, plumbing supplies, heating materials, mill supplies, building materials and farm and home equipment. In addition, it provides docking facilities for trucks of all sizes.

An open house and manufacturer's exhibit was held recently, which was attended by dealers, their families and customers.



NEW showroom features kitchen and bathroom equipment

Cuts Cost of Installing Automatic Gas Heat...



4 popular sizes ... 40,000, 60,000, 80,000 and 100,000 BTU **10 Year Written Guarantee** Burns natural, mixed, manufactured and LP gas.





Pictured here is one of 82 homes built by C. B. Kelley & Co., Nash ville, Tenn. Mr. C. B. Kelley, prominent builder, says-"We used 30 Norman Southerners in our Pleasant Valley sub-division last year , we are also using this equipment in our new Duncanwood sub-division of \$2 homes.

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Colorado Lumber Dealer Doubles

Business in One Year

New building for Scatterday company follows expansion



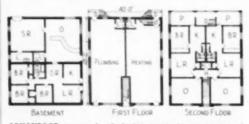


ABOVE right, the first office and warehouse of the Scatterday Lumber Company that now occupies the ground floor of now hullding above

BUSINESS of the Scatterday Lumber Company, 9605 West Colfax Ave., Lakewood, Colorado, increased 100 per cent during the year ending in mid-1949. This increase, ample assurance of continued success, led to the expansion of the lumber company and construction of new headquarters during the summer of 1949.

The multi-purpose building constructed by the lumber company has three floor levels. Since it is located on sloping terrain, the ground floor has openings on three sides. This ground floor contains the company's office, a display room, and living quarters. The first floor is occupied by two stores—plumbing and hardware shops. The second floor contains two apartments. The total floor space within the building is 6000 square feet.

The building is a kind of permanent display unit since



ADVANTAGE was made of sloping terrain in construction of Scatterdary building. A variety of materials was used so that building serves as exhibit of lumber company's wares

many samples of building materials were used in its construction. Each of the 24 doors in it is a unique sample, for example. Various types of flooring, brick, tile, and glass brick were also built into it.

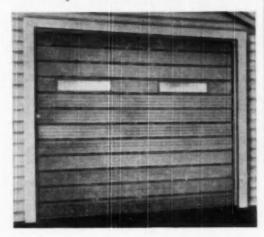
Owner H. W. Scatterday, who is a member of the Moun-(Continued on page 212)

AMERICAN BUILDER

310

ARCHITECTS & BUILDERS <u>FIRE "RICHARD"</u>... <u>HIRE "ROLY"</u> TO "OPEN THE DOOR"

Roly Does More For Less!





It opens the door to everybody's satisfac tion!

The architect specifies the MORRISON Roly-Door because it conforms to all styles of architecture — because its beautiful simplicity is a welcome addition to new as well as old homes.

The builder chooses the MORRISON Roly-Door because it costs less to install . . . because it's individually packaged.

And the home owner is more than satisfied because the MORRISON Roly-Door costs less to own — and is built for a lifetime.

But that's not all ... because no other overhead garage door has ALL THESE FEATURES:

- + Four-Sectional
- * Coots Loss to Own
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- Welded at Factory Trouble-Free (Patented)
- Pend.1 Hinging
- * Built tu Laut

- Wootherproof
 Completely Painted
- * "Touch-'n-Go" Operation
- * Quiet and Safe
- + Lock Keyable to Home
- Minimum Field Assembly
- * Individually Packed
- Conforms to all Architecture and Building Codes

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MORRISON STEEL PRODUCTS, INC. ROLY-DOOR DIVISION 649 AMHERST ST. BUFFALO 7, N.Y.

MAY 1950

MAKE Sales OUT OF SUNSHINE

WITH



Just one sunny summer is more than enough to prove the need for Canvas Awnings. Move your houses faster . . . the comfort, beauty and protection of Canvas Awnings are powerful selling points in a competitive market.

Your local canvas awning manufacturer offers a complete range of fabrics, colors, designs and hardwares.



THE CANVAS AWNING INSTITUTE, INC. and NATIONAL COTTON COUNCIL

"There is No Substitute for Canvas Awnings"



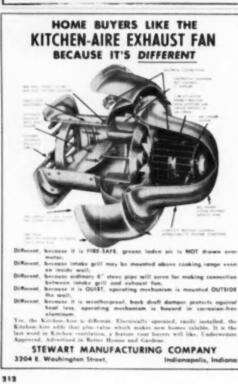
and to speed work. It is easily transportable and can be moved right to the job. Large table and sealed for life ball bearings, plus rip fence, mitre gauge, saw goard and base, all complete, less motor. \$9750 (Zone 1) only

Another SHOPMASTER sn the rob tool that speeds work and saves you momen Advanced design of curring head makes knife setting sure and accurate. Scaled all bearings for long life Fence locks in conset to event rwist. 17150 (Long 2).....



Write for complete catalog and price list. SHOPMASTER, INC.

Minneepolis 15, Minn. 1213 Third St. So.



(Continued from page 210)

tain States Lumber Dealers Association, established his business in Lakewood three years ago in a small shed that served as a warehouse, office, and display room, Formerly, Scatterday was a sawmill operator, an occupation that prepared him for his succesful venture as a lumber dealer.

This lumber yard functions as a family affair since Mrs. Scatterday serves as office manager. The Scatterdays' son, Harold, is the company's home planner.

The yard now operates two trucks and employs two men. Roy Barlow is the yard foreman. Further expansion plans are now being developed. These include a new lumber shed and a warehouse on the site of the present office.

The building was constructed by the Stonebeck Construction Company, also of Lakewood, Colorado,



H. W. SCATTERDAY, Sr; Mrs. Scatterday: Harold Scatterday. Ir: Don Manning; and Roy Barlow great customers in new office

Plywood Product Approved in N.Y. Tests

Plyscord, a utility Douglas fir plywood, has been approved. for use as exterior sheathing and as a subflooring and roofing material by the Board of Standards and Appeals, New York City, Vernon Sears, staff architect, United States Plywood Corp., has announced.

Plyscord sheathing is produced in a minimum thickness of his inches and is made of three plies of Douglas fir, with the grain of the center ply running at right angles to the two surface plies.

Plyscord for subflooring is made in thicknesses of 38, 32, 54 and 34 inches. The 34-inch is made of three plies and the other thicknesses in five plies

The tests were made at Manhattan College under the direction of the Board of Standards and Appeals.

Hard Board Suitable for Exteriors

A new weather-resistant hard board, suitable for exterior building, is made possible through a plastic treatment adapted to hard board manufacture, according to Harold A. Miller, president of Forest Fiber Products Co., Forest Grove, Ore.

Called "treated" Forest Board, the new material utilizes selected Douglas fir fibers in the same controlled process as the standard grade Forest Board. During the manufacturing process, the plastic treatment is given to each fiber, and after the board is formed an additional surface treatment is given.

Besides furnishing water resistance, the plastic treatment provides greater structural strength, wear resistance and an added advantage in its resistance to soap or alkali, Miller stated. He said that the new board resists chipping, denting and breaking and, like standard hard board, is grainless so that it will not splinter. In the manufacturing process a hard, glassy surface is produced that takes any type finish by spraying, baking or brushing.

The "treated" hard board is being produced in sizes of 4x1-feet to 4x16-feet and in thicknesses of 16. His and 34 inches.

NEW welding technique builds STRONGER, more SILENT HOLLOW STEEL DOORS



USI-

HOLLOW STEEL DOORS

* ALWAYS PLUMB

+ ALWAYS SQUARE

* ALWAYS ACCURATE

- * MORE RIGID
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MAY 1950







Copper-Steel CELLADOOR

Madern design, finast materials, tap craftsmanship make the Callodeer vostly superior to endinery, ald-fashlaned wooden basement doors. There's simply no finer door mode . . . at any pricel



SAVES YOU TIME LABOR, MONEY !

You can install the Colladear in as little as ten minutes . . . as pleased buildors everywhere can testify. And there's

nothing to go wrong. No breakdowns, repairs, or maintenance for your customers.

SATISFIES YOUR CUSTOMERS KEEPS THEM SATISFIED



The Colladoor opens the way to new living pleasure! And it keeps giving pleasure for a lifetime. It's super-sofe, feel-proof, weather-tight, fre-proof, and flatters every home. Biles performance means hoppy customers . . . better business for you.

Please and ma all the facts that a when I install Blice Celledoars. Company Nome Address		Anhibed
Address		D Bullder
Zone	Cauta .	Declar, *
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Pneumatic Nailer Used Effectively in California

A portable, pneumatic nailing tool is being used very effectively by a North Hollywood contractor, Winchell Brothers, according to L. A. Winchell, head of the firm. Called the Azor Nailer, the tool is manufactured by the Azor Products Co., Los Angeles. Distribution in the area is by



TRIGGER releases driving mechanism



HOPPER holds approximately 600 nails

the Atwood Machinery Co., Los Angeles.

The Winchell firm, in addition to a general contracting business, handles carpentry subcontracts on large single-family or multiple housing projects, and uses power tools extensively.

Use of the pneumatic nailer was begun about six months ago. Winchell said that about 500,000 feet of flooring has been applied with two of the tools at about one-third of normal nailing cost, and that the tools paid for themselves on one big apartment project.

The tool operates by compressed air. requiring 12 cubic feet of air at 90 pounds of pressure. Builders using only one mailer can utilize a 17 cubic foot portable compressor. Winchell has a 40 cubic foot compressor which, besides the two nailing tools, operates spray guns, pneumatic hammers and spades.

The nailer weighs about 30 pounds when loaded with nails. At the bottom there is a stirrup into which the operator slips his right foot ; and after driving a nail he lifts the machine with his foot to the next nailing position. A trigger starts the driving mechanism

The hopper is loaded by throwing two or three handfuls of nails in at random, the nails automatically reaching the proper position. Capacity is about 600 8p nails. The tool is used mainly for nailing subfloors, but can be used for any flat work or on roofs where a man can saiely stand.

New National Homes Plant

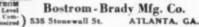
Negotiations were recently completed for leasing a former Army reconsignment depot at Horsehears, N.Y., to National Homes Corp., Lafayette, Ind. The building, owned by Webster Industries, Inc., has 175,000 square feet of floor and shipping space. National Homes expects to begin operations around April 1.

SLIDE-A-FOLD



--- A handy, practical and LOW COST way to reach the valuable storage space of the attic. . COMPLETELY ASSEMBLED . EASY TO INSTALL . LOOKS GOOD . SUPERIOR CONSTRUCTION **REQUIRES SMALL SPACE** . LOW IN COST! Low freight rate - Weight 65 pounds WRITE TODAY FOR FULL DETAILS CRAIG WOOD PRODUCTS COMPANY COLUMBUS, GEORGIA USE BOSTROM LEVELS They Satisfy, Give You Precision and Save You Money Carried in stock by distributors from coast to coast. Write for free booklet and

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ARCHITECTURALLY DES

EQUIPMENT AND CARPENTER-BUILT DOORS • You can furnish "Over-the-Top" Door Equipment for practically any size or type of door . . . mill made or carpenter built. Doors



can be architect-designed to harmonize . . . a real adventage for the homes with attached garages. On remodelling jobs old swinging type doors can easily be converted at modest cost.



SECTIONAL TYPE

 Frantz, the leading manufacturer of onepiece "Over-the-Top" Doors, now offers a sectional-type door with new design advantages.
 Frantz experience has produced a door 14 ways

better . . . one that can be installed more quickly and easily. Available in two popular sizes: 8' wide x 7' high, and 9' wide x 7' high.

ONE-PIECE UNITS

EQUIPMENT AND DOOR COMPLETE

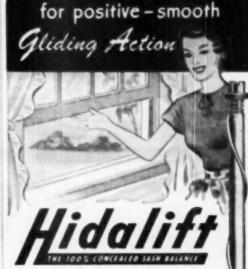
 Available in a variety of sizes, wood or aluminum construction, Frantz one-piece Door Units lift automatically when handle is turned... are powered by famous "Overt

the Top" equipment. Require only 2" headroom. Pre-bored bolt holes and simplified design cut time and labor costs.

Write for full datails on the complete Fronts line.



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Hidalift balances operate on a counter-balanced principle that assures quiet and positive gliding action. This is made possible by the fine quality coil spring and scientifically designed twist of the spiral track. A self-centering brass follower guide bushing keeps the free-floating steel tube centered in the sash to prevent jamming and helps maintain perfect window balance.

These are just a few of the many exclusive features that make Hidalift the finest mechanical sash balance on the market. Send today for complete information and prices.

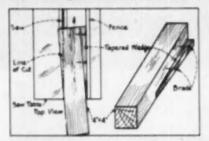


Two Types of Attaching Brackets

Hidalift balances are available in either the "Cup" type or the "L" type attaching bracket.

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HIDALIFT DIVISIO	or Mig. Co., Tos	rington, Cong.	
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w to Taper Lumber on a Saw Table

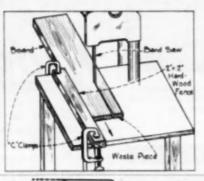


HIS job can be done quickly and easily by using a long tapered wood wedge. Nail the wedge on one side of lumber using thin brads. Adjust the saw table fence, and the lumber with the wedge is fed forward in the usual manner with the wedge riding against the fence .-- Herbert E. Fey, New Braunfels, Texas.

HOW TO DO IT . HOW TO DO IT . HOW TO DO IT . HO

How to Make Fence for Band Saw

WHEN boards need to be I ripped and only a band saw is available, the above method can be used. Secure a straight piece of hardwood and fasten in place with two C-clamps. This serves as a temporary fence and strips of various widths can be cut. quickly by merely moving the hardwood piece in or out to the proper distance from saw - Herbert E. Fey, New Braunfels, Texas,



May Decignated 'National Water Systems Month'

More than two tons of printed matter will be sent to electric water system dealers to help them capture sales during and after National Waters Systems Month in May, according to the National Association of Domestic and Farm Pump Manufacturers.

Display streamers, envelope stuffers, merchandising booklets and direct mail sales aids were sent prior to observation of the week. The campaign is especially directed to the sale of new water systems for the 600,000 farms electrified in 1949, and to promote pump and tank sales for the farms which already had electrical service.

Association officials said that economic conditions are favoring water system dealers again this year, since farm income, although expected to be down by 11 per cent, will still be more than two and one-half times the 1939-40 level. All-time high for farm income was in 1949 with farmers taking in \$35 billion. Farm income is expected to exceed \$29 billion in 1950.

Slogan for National Water Systems month will be "Profit Grows When Water Flows." Keynote of the dealer sales aids will be "Running Water-Heart of Today's Living."







Portable Saw and Radial Arm

Combination - complete, only \$313

- · Saves the cost of two separate saws
- For all maintenance and construction work
- · Portable saw attaches to arm in a moment
- 6 Makes every kind of cut with positive accuracy
- Quick, easy adjustments for bevels and depths
- America's finest precision power saw

Specimatic Portable Saw—A powerful high-speed saw, becautifully balanced for easier handling, taster sawing. Lipht, compact, makes pocurate cuts in any position. Cuts jell time way down, eliminates fatigue. Four sizes for cuts $2^{1}_{2}^{12}$ to 4^{1}_{16} depth.

Model K75 (212" Cut) \$123.

Speedmatic Radial Arm—Above portable saw attaches quickly and firmly to arm. Retractable arm has long smaath strake 39° crossout-capacity, seings 45° right or left includes ook table and tence, rugged steel base with legs. Four sizes for above saws.

Model for K75, Complete-\$190.

See the Speedmarks at leading Mill Supply, Hardware or Lumbar dealers. Write for complete catalog and name of dealer nearest you.



In Canada write: Strongridge Ltd., St. Cathorines, Ont.



This fine soft wood is one of the Associated Woods produced by member mills of the Western Pine Association. It is fine-textured, and although light in weight, is very strong for its weight. Carpenters like it because it is easy to work, nails without splitting and holds nails and glue firmly.

Engelmann Spruce is suitable for many building uses such as sheathing, subflooring, framing, ceiling and siding. It works up satisfactorily for interior finishing, mill work, industrial boxes and crates. The tight knotted boards are often used for knotty paneling particularly where a wood of light color and rather inconspicuous knots is desired.



For more information about Engelmann Spruce, send for free illustrated Facts Folder and Grade Use Guide. Address WESTERN FINE ASSOCIATION Yeon Building - Portland 4, Oregon

THESE ARE THE WESTERN PINES THESE ARE THE

ASSOCIATED

WOODS

Idaho White Pine, Ponderosa Pine, Sugar Pine

Larch, Douglas Fir, White Fir, Engelmann Spruce, Incense Cedar, Red Cedar, Lodgepole Pine,

WOODS FROM THE WESTERN PINE REGION

WELL MANUFACTURED

THOROUGHLY SEASONED

Conveyor Made by Booler Proves Worth Project

A conveyor made by a local roofer has proved to be a valuable piece of mechanical equipment for the H. F. Nunn Co., West Los Angeles, Calif. roofing contractors. The machine, which will raise 1455 tons of material



CONVEYOR in action on project. Machine is capable of lifting 1414 tons per hour

an hour to a three-story height, is being used on a large 608 project.

handy man shipped anywhere

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Lends unsurpassed beauty and

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modern fireplace that fulfills all mod-

ern day requirements used with gas

Large variety of attractive models

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in brick, stone, wood, etc., available

The conveyor is made of a steeltabing ladder which is fastened to the roof with a bracket. A 7 HP motor is attached to the bottom. A cable runs from a spool attached to the motor up the underside of the ladder to a pulley on the topside. The pulley is attached to a carrier which is built to travel up and down the ladder rails on wheels.

A clutch engages the cable and at the same time releases the safety brakes. When the load is dumped at the top, the carrier goes to the bottom by gravity. By attaching a hopper, it can be converted to a gravel loader.

Asso. Releases Data On Nailing Hardwood Floors

In many cases, insufficient attention is given to proper nailing of tongued and grooved hardwood floorings; and with improper nailing there is every chance that some tongue splitting will result, according to a statement by the Maple Flooring Manufacturers Association. When this happens, the statement said, sque, ks or creaks are likely to develop, because flooring steips fail to hold down and together as tightly as they should.

"The position of the nail point and the angle of the nail are all important. For effective results, nails should be driven at an angle of 45 to 55 degrees. and the first nail or two driven into the strip of flooring should be 'toenailed' toward the preceding strip to which it joins. This procedure makes tight end joints. Use heavy flooring hammer and set nails, breaking joints as the flooring is laid.

"The spiral type of floor screw is gaining in popularity in many sections of the country, especially when used in laying Northern Hard Maple flooring. It drives like any other type of nail, but turns and holds like screws. Experienced floor-layers using the spiral floor screw report little or no tongue splitting, bending or waste.

"The recommended nail specifications follow:

"For 34-inch flooring.--Use fourpenny cut steel flooring nails or 15/2 No. 1 spiral floor screws, driven nine inches apart.

"For #ha-inch flooring.-Use 6, not over 7-penny cut steel flooring nails or 234 and 232 No. 5 spiral floor screws, driven not over 16 inches apart.

"For and provide the second se

"Wire casing nails may be used where cut steel or spiral floor screws are not obtainable. Use only nonsplitting type wire nails, and nail to each support bearing."

SALES REPRESENTATIVE WANTED

by established manufacturer of finest quality entry and interior bore-in door locks in low price range. Line has immediate recognition and acceptance. Want Commission Representative with building material or hardware experience. Desirable to have contacts with wholesale jobber and contract dealer trade. Several desirable territories available. State full particulars first letter. Confidential. Write to WESTWOOD MANUFACTURING CO., 1420 So. Evergreen Ave., Los Angeles 23, California.



or electricity.

Furnished complete-ready to be installed in hour's time of

DEALERS, BUILDERS and HOMEOWNERS write for catalog and full information.

THE READYBUILT PRODUCTS CO.

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INCREASE PRODUCTION 100%

AMERICAN BUILDER

DE 81 TER FORMI BONDERIZED AFTER FORMING is an important new feature added to all Lawson Bathroom Cabinets! The bonderizing process is applied AFTER all shearing, drilling and forming is completed. It provides 100% BONDERIZED

LAWSON

BATHROOM CABINETS

AND . . . Lawson Cabinets, BONDERIZED AFTER FORMING, cost no morel

protection against rust and corrosion . . . assures

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ARCHITECTS SPECIFY LAWSON BATHROOM CABINETS



of Grilley oth Types **Corrugated Steel** WINDOW WELLS and Guards Sturdy, heavily bright galvanized, genuine USS Copper Steel assures lifetime service. Fast to install, low in initial cost and completely satisfactory on every application. Full range of sizes. Heavy-duty, expanded metal guard grilles will carry heavy weight-admit plenty of light. At your dealer or write ... NITED STEEL ABRICATORS, INC

The Practical Answer to

Low Cost AREA WALLS

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Long Handle **CEMENTERS'** TROWELS

Highest grade spring steel blade, tempered, ground and polished. Steel mounting, first quality ash handle 7 feet long, adjustable to any position; bolt and nut.

4 Level

18x5	inches	\$ 8.00	
24x5	inches	9.00	
		10.50	
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LEVELING INSTRUMENTS

These levels are simple, accurate, durable and complete with 9 foot rod, target, plumb bob, carrying case and directions.

No 2 Form Level \$34.00 No. 4 Contractor's

\$49.50 Level No. 5 Convertible Level,

WRITE FOR

without Compass \$71.00 No. SC Convertible Level, with Compass \$92.00

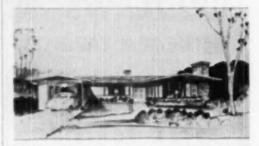
> Long Handle Trowels and Leveling Instruments shipped Express, transportation charges collect. Immediate delivery. Send money order or check with your order.

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FIRST CHOICE OF THE TRADE FOR 65 YEARS

House Designed as Home Show Feature



HOME show house highlighted new ideas, materials, equipmen

ESIGNED by John I. Mattson, Seattle architect, especially for the 1950 Seattle Home Show and Household Fair this house was built inside the Field Armory for the Seattle Master Builders Association by Lars Boyd and Harry Mahrenholz of Seattle. It was razed after the show was over

In planning the house no thought was given to a design which could be built at any definite cost. Emphasis was on showing as many types of materials and equipment as possible while still retaining good design. A long lane of flowers and pools led from the auditorium's entrance to the front of the house.

An interesting feature is a small patio and garden at the rear, enclosed by a board fence and full of potted plants, offering privacy on a small city lot. All types of tile were used throughout the house. Philippine mahogany paneling combined with wall paper and copper-foiled-papered ceiling provided a living room with unusual appeal.



LANDSCAPING holps solve porblom of privacy on small let

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COLORCRETE is today's biggest business opportunity in the building field. High returns from a low investment. Easy, fascinating work. Large waiting market because Colorcrete is applied over all kinds of old and new masonry surfaces—exterior and interior.

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HOME BUILDERS MANUAL For Contractors



This collection of material in its three-ring binder is designed as a selling kit. Any section may be removed and shown or given to the prospect. In the latter case a new section, punched for insertion, can be obtained. The user can add his awn material, such as the local building code, to make it as complete as desired. The Manual contains

General advice for the user American Builder's Blueprint Plans book Portfolio of 14 81/2 x 11 forms for estimating, job records and contract agreements Set of open Specifications for a house **Complete set of Material List shoets** Contractor's Bid and Budget Estimate forms Forms with carbon for "Estras mall Job Estimator forms for repair jobs Home Owner's Property Records and Building Contract 1948, 2nd. 9½ x 11½, Fabrikoid binder, \$5.00. Complete lists of House Plan, Carpentry and Estimating books. Real Description AMERICAN BUILDER SIMMONS-BOARDMAN PUBLISHING CORPORATION 30 Church Street Name York 7. M. V.

MAY 1950

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It's the nation's leaders giving their best that puts Har-Vey Hardware ahead of the rest!

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-- all contributing the best of materials and workmanship as producers of component parts for Har-Vey Hardware -- that makes Har-Vey first in its field for quality.

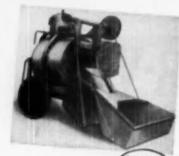
Yes, and it's advanced design that gives Har-Vey engineering leadership -- with new features that make it completely rustproof and assure positive locking -- with superlative ease of installation -- and with smooth, silent rolling that's sure to last for a lifetime.



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Please send me your free folder on NAME	ralling dates & Rar-Vay Hardware	
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HEAVY-DUTY HALF BAGGER with Power Logder and Tank

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gives the smaller contractor every production advantage found on larger misers. Output is increased because high shoveling is aliminated. Automatic water measurement, rapid discharge, and Briggs & Stratton mir-cooled engine insure parfect performance. Copacity 31% or fit, mixed concrete, pits 10% overland.

Write for prices and specifications MULLER MACHINERY CO., Inc. 736 Whitman Avenue Metuchen, New Jarsay Tilters, Nan-titlers, Plaster Misers, Concrete Carts, Morter Baxes Letters -

(Continued from page 33)

Mr. S. O. Dunn for the Publisher's Page. I can find nothing in any of these articles that indicates an anti-labor policy. What I do find in them is an anti-monopoly policy. The American Builder has always stood opposed to monopolies in any form by any class or group, regardless of whether the class or group happened to be production, distribution, contracting or labor. I can assure you that we have no anti-labor policy and that if you construe any of our editorials to reflect such a policy I would urge that you reread them. I am sure that you will find our argument not to be with labor, but rather with certain types of labor leaders who obviously are less interested in the welfare of labor than they are in promoting their own personal fortunes. We have attacked these labor leaders on the basis that what they are trying to do must in the end bring about economic conditions in this country which will hurt labor worse and earlier than it will hurt anyone else. We would do exactly the same thing if an individual or combination of manufacturers

promoted policies which halted work, brought about crippling stoppages of production, and resulted in laying men off and starving their families. There is a very easily identified line between opposing labor and laboring men on the one hand, and opposing a type of leadership to which some of them are subjected.

I might say that I was especially surprised to hear your attitude since of all the organized labor groups in the country, relationship between American Builder and the United Brotherhood of Carpenters and Joiners is and always has been most cordial. Here in Chicago, where we are published, a number of us enjoy the personal friendship of many agents and top executives of the Brotherhood. I have never heard one of them express the slightest objection to any editorial or editorial policy of ours. I can assure you that we know them well enough, and that they know us well enough so that if there was anything which in their judgment was inimical to the welfare of the Brotherhood or of organized labor they certainly would tell us about it in a hurry.

We would indeed be very (Continued on page 224)





rain even when window is open!

Well aware that dropping the top sash would allow rain to enter and ruin floors, furnishings and decoration, Gate City designed its awning windows with fixed hinges throughout.

This feature is one of the most important points to look for in the awning windows you specify or install. It symbolizes the careful attention Gate City gives to all requirements of service.

Add to this weathertightness the other Gate City advantages of easy weatherstripping, elimination of condensation, economy of maintenance, factory-applied toxic treatment—all proved by more than 10 years of satisfactory service on countless installations, and you have many important reasons why these beautiful windows are preferred by leading architects and builders all over the country.





For complete information about Gate

City Awning

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WOOD AWNING WINDOWS

Toxic-treated against rot-fungus-termites

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when **DRY** WALL CONSTRUCTION is safer, faster, less expensive?

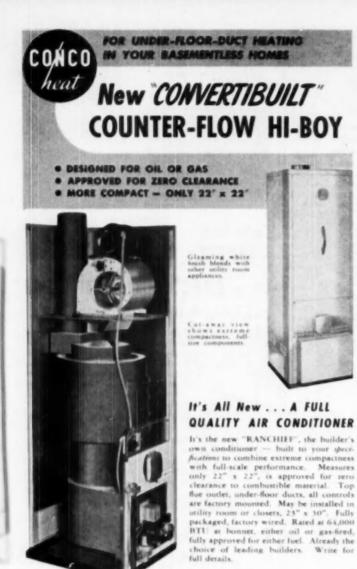
If you have experienced the roar and damage of a falling ceilingthere is little we can tell you about Dry Wall Construction. Mr. Carl G. Lans, Technical Director of the NAHB says, "Before the war, everything was lath and plaster; now it is a rare thing in tesidential construction. Dry wall has proved satisfactory not only because it is much more economical, but also because it prisduces a true, straight wall ..., and eliminates the introduction of many gallons of moisture into the house."

For 32 years Homasote has been used for Dry Wall Construction-in millions of dollars of private homes.

Dry Wall Construction – with Homasote Big Sheets – offers many major advantages . . . The average wall is covered with a single sheet; batten strips and unsightly wall joints are eliminated. You get walls that are permanently crackproof, ideal for paper or paint, lending themselves to modern decorrating effects, modern mouldings and trim . . Let us send you performance data and illustrated literature on Homasote and allied products.

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Standard Homasote (Big Sheets) Striated Homasote	•	ed: 3	The Nova Roller Door	** *	* *
Standard Homasote (Big Sheets) Striated Homasote (Tiles and Panels) Wood-testured Homaso	•	ed: 3	The Nova Ridler Door The Nova-Shingle and the Nova-Speed	** *	> > >

MAY 1950



"CONVERTIBUILT" FOR OIL OR GAS, OR OIL NOW, GAS LATER





Letters -

(Continued from page 222)

foolish if we took an anti-labor attitude. There is an intelligent reason for understanding the problems of labor and of the sound, constructive unions such as your Brotherhood. That reason is that there will be no houses built in this country without skilled labor and no good construction done without the kind of screening and supervision exercised by your Brotherhood and similar unions. We pride ourselves on having enough intelligence to understand that. But even if that were not enough, there is a selfish reason. It is that a large number of our subscribers, both large and small builders, have been and still are members of the United Brotherhood of Carpenters and Joiners. It would be only human, even if we did disagree with it, which I assure you we do not, to refrain from attacking them, since their good will is worth much to us.

The action your Local Union took with regard to renewing subcriptions to the American Builder is of such concern to me that if on rereading the editorials I mentioned, you and the other members of the Union still feel that they are anti-labor, I wish you would take a few minutes to tell me wherein you can construe them to be so. If you would do that I shall consider it a favor and treat it accordingly.

"Curse of Monopoly"

Sir: Noticed your editorial titled "The Curse of Monoply" in a recent issue of American Builder.

It is my belief that you used very good logic in preparing and presenting this material. You have hit upon many points which have previously been ignored by many political leaders.

I believe that men such as you do a great deal for the country by publishing the truth as you see it on such a controversial subject.

R. J. Waddington, Vice President American Roof Truss Company Chicago, Ill

Publisher's Page

Sir: I am very interested in your "Publisher's Page" of the American Builder.

What this country needs is more men of the caliber and courage that Mr. Dunn displays on his page. This (Continued on page 226)

AMERICAN BUILDER

224



SEAL-ALL CLIPS



A simple sturdy clip designed to interlock shingle sections and prevent raising of sophalt chingle tabs. The perfect clip for hexagonals, 3 in 1 strips and individuals laidup Letters -

(Continued from page 224)

one article is worth many, many times

the subscription price. What he has

to say has certainly set me to think-

ing-not only thinking but talking.

Page" in book form please put me on

Sirs: Congratulations to you and the

entire staff of hard working individuals who published the American

Builder NAHB Convention Daily,

and interesting publication, inasmuch

as it is impossible for an Association

Executive to cover all the sessions and

entertain the members from our own

organizations at the same time it gives

us the boiled-down highlights of the

various happenings and sessions that would otherwise not be known about.

Probably not many of the conven-

tion delegates will take time to tell you

how much they appreciate the paper.

They like it for the simple reason that

the NAHB Convention is so large it

is impossible for anyone to know everything that is going on, and your

It is a very valuable, well-written,

the list-no matter what the cost.

Convention Dailies

If you ever publish his "Publisher's

Alonzo Boardman,

Augusta, Georgia

Actual alian In al Sout-All Clip an Dutch Lap method.

- Made of solid copper wire pliable yet strong enough to anchor single sections.
- · Cannot rust out.
- Hammer is only tool necessory.
- · Easy to handle.
- · Beauty of roof unmarred.
- Perfect on repair jabs to correct leaky, unsightly roofs
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paper keeps them informed. Two years ago one of our illustrious members asked if it would be possible to make up a daily for our State Convention like the American Builder put out at the NAHB Convention. He said, "That's a fine little paper and it would be nice if we could put out one like it."

None of the local executives probably have much contact with the fellow left at home while they are attending the Convention. Why not make it possible for them to mail home the copies of the papers that are left over each day or for that matter print a few extras for such a purpose. Not only would it promote the *American Builder* and the NAHB Convention, but it would bring up to the minute news to the fellows left at home and it might excite enough interest for a larger attendance the following year:

Congratulations again, on the excellent job the American Builder does for the building industry.

L. Tupes, Executive Secretary Columbus Home Builders Association Columbus, Ohio

Editor's Note: Thank you for the letter and the suggestion. We do print extras for distribution to those who do not attend.

(Continued on page 228)

COMING SOON!



WATCH FOR BIG KWIKSET ANNOUNCEMENT

Look to Kuckert to be first and foremost with top quality residential looks.

AMERICAN BUILDER

Kalkset Locks, Inc. Anabain, Coliforn

224

All builders should know these facts about pressure-treated lumber

SECOND

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FOURTH

al reard serves.

PRESSURE TREATMENT

Authorities say that pressure

treatment provides the only

sure, lasting protection to

WOLMANIZED Pressure

Treated Lumber combines all

these requirements-lasts 3

treated wood, because it's treated under 150 lbs, pres-

tion is deep in the wood fibers. It's clean, odorless, paintable,

non-leaching, non-corrective. Wolmanized Pressure-Treated

Lumber has been proved in use for over 25 years. It will prove its value to your cus-

tomers and boost your good reputation as a builder of

sund, durable, trouble free

aure per square inch. P

times longer than un-

olec-

Surface Application-



PROTECTION - Treating of lumber preserves it -- just as alloys preserve metals. The purpose is to protect lumber against costly rot and termite damage.



OTHER QUALITIES TO LOOK FOR—For greatest usefulness, preservatives also ahould be clean, odorless, paintable, non-leaching and non-corrosize.



For complete information about WOLMANIZEP Processer-Transed Lamber, write for free booklet. "Neg. U.S. Not. CH.





TO INSTALL IN STOCK SIZES FOR A WIDE VARIETY OF WINDOW TYPES

Now Ready

PRECISION-BUILT FOR DRAFTLESS VENTILATION

SOLAR AIR-FLO

Louvered sections are placed at top, bottom or sides of stationary window pass, according to design requirements. Baffle doors regulate circulation of fresh air, winter and summer. Servens concealed in *air-fla* section, removable from inside, for eleaning. Solar areas can be glased with single, double or triple plate glass, according to climate.

Solar dir-Flo windows may be installed in any and all kinds of wall construction. The unit comes assembled and ready to place, complete with all exterior trim. No prevision work or special tools are needed. Window frames and all sectional parts are precision-built of both treated wood and extruded aluminum, secording to coatomer's requirements.



INSTALLED IN ALL KINDS OF WALLS

Solar Air-Fla windows can be used effectively in homes and commercial buildings, for building or remodeling. They comhine beauty with utility. Learn more about these versatile units and their reasonable cost. Cuch in on national advertising new appearing in leading magazines. Profit-wise dealers and builders will write NOW for specification data.

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(13 eqs. orderste shingles on gypeum) \$7563 per house (13 eqs. weed shingles on gypeum)

-that's what ES-NAILS saved me...good money in the bank!"

- says a prominent New Jersey builder.

In full, he stated: "I use ES-nails to attack both wood and ashestis shingles directly to gypsian sheathing and they really do a job.

"ES-nails give better results than other types of construction . . . we are highly pleased with their locking ability-and use them exclusively."

Other practical reasons for using ES-nails include: their case of application-no special tools are required, use a regular shingling hatchet or carpenter's hammer. they are selflocking, attaching wood or asbeston shingles directly to gypann or insulation abeathing . , and they can be driven at any convenient point-no need to locate studs.

For more information about the value of ES-nail construction—and the savings it will mean to you, call your supplier, or write: Elastic Stop Nut Corporation of America, 2330 Vauxhall Road, Union, New Jersey.



National Gypsum Co., Weather best Corp., Creo-Dipt Co., Inc., Rousbey and Mattison Co., and American Stained Shingle Co. Approved by the Red Cedar Shingle Bureau, Seattle, Wash-

Approved by the Red Color Shingle Bureou, Scattle, Washington, representing manufactween of Cortignale Shingler.

Letters -

(Continued from page 226)

High Cests in Australia

Sir: This is to request you, if within your power, as a matter of urgency, to obtain and forward to me by airmail the general details, method of working, etc., and at a later date a summary of the legislation of the FHA Scheme.

In Australia we are finding that owing to the high cost of building construction, would-be home owners are finding it difficult to finance their requirements and the Lending Authorities are only prepared to lend approximately 75 per cent of the money required. Very little money is available for second mortgage owing to the pegging of interest rates.

Some (in Australia) have been advocating a government backing of risk -money similar to the FHA scheme and with a view to examining it in all its implications before submitting any proposals to the Commonwealth Government, I am seeking your aid

> E. S. Elliott, Secretary The Master Builders' Assn., Melbourne, Australia

Charter Subscriber

Sir: I am proud of the fact that I am a Charter subscriber of American Carpenter and Builder, and have nearly all the original numbers—including a bound copy of the first years.

> W. H. Butler, Builder Buffalo, Wyoming

Charter memberships to American Carpenter & Builder, forerunner of a publication which merged with American Builder, date back to 1905.

American Builder, 1872

Sir: Am passing on to you a page from "Appleton's Journal" of January 27, 1872, which may probably interest you. Have been reading the American Builder since 1885.

> James M. Holm, Builder Upper Darby, Pa.

In the January 27, 1872 issue of "Appleton's Journal" submitted by Mr. Holm, the American Builder had the following 1-inch advertisement on page 112:

"The American Builder: The only paper in the country devoted specially to the Building Arts. Terms, \$3.00 a year, in advance. In consequence of the Great Fire, no more Specimen Copies can be sent free."



Amazing new General Chef cooking-refrigeration combinations are available in GAS-ELECTRIC models (illustrated above), or ALL-ELECTRIC (refrigerator-110 volt; stove-110 or 220 volt; oven-220 volt).

Also available-4 cu. ft. General refrigerator with Formica table top.



338



Increase fire protection by installing metal clad or Kalamine doors with Coburn Fire Door Hardware. Dependable, smooth-operating Coburn Fire Door Hardware will save valuable goods and protect personnel . . . and your fire insurance costs will be reduced.

Coburn Fire Door Hardware is made to specifications of The National Board of Fire Underwriters and, where necessary, bears the U.L.I. label. Special sets are available for single and double incline or level slide doors; vertically operated doors. All are equipped with automatic self-closing devices. Write for Catalog #210 showing the full line of Coburn Fire Door Hardware; charts showing required headroom; wall space and other vital information.

Engineering help is available without obligation.

Other Coburn Products include #500 Swing-Over Garage Door Hardware Sets, overhead trolleys and conveying systems for carrying loads up to 3,000 lbs.



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The **COMET** Senior

20

MOR CUTTING



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RETRACTABL

Any Comet owner has Profit on his side! - at least in the cutting end of the business. Always built to make money for their owners, Comets rocket on to greater acceptance as

number one radial power saws in the entire field. The recent new model Comets sparkle with exclusive improvements-and sell at a new low price. They make all the cuts necessary, from start to



finish, outside and in. Thousands of owners say Comets short-cut to profit. Write direct, or see your nearest Comet dealer.



MAY 1950





Available with e without branza covers that completely hide spring, as shown above.

PERMITS REMOVAL OF SASH WEIGHTS, INSULA-TION OF MULLIONS.

Slash Labor Costs

Simple installation allows one man to easily install 50 or more windows in 8 hours. No high-priced skilled labor needed. This means you can get more satisfied customers at lower cost higher profit?

Jops in Operation!

Subsoch, positive action, accurate balance; furger-tip control plus the perfect seal against draft, dust, mojsture. No wood-towood contact. Prevents sticking windows and window rattle



More Low-Priced Homes **Coing Up. Survey Shows**

An appreciable increase in the construction of lower-priced homes is currently taking place, according to a report by the committee on trends and economic policies of the United States Savings and Loan League.

Two-thirds of savings association managers surveyed by the committee said that the lower-priced homes account for a "larger proportion" of total building than a year ago.

Other information indicated by the committee's survey of building and housing trends :

(1) There is little change in building costs from six months ago. Half the savings association managers polled said no change had occurred, while the remainder disclosed only slight variations up or down.

(2) The market has tightened considerably for both high and mediumcost homes, but the lower-cost new house is still in strong demand.

(3) Houses for sale are remaining on the market somewhat longer than was the case six months ago. This is particularly true in the high-priced new home category.

In commenting on the results of the survey, Henry A. Bubb, Topeka, Kas., president of the League, said "The buver's market is back in earnest."

linoleum underlay drive screws



To make your linoleum underlays hold tightly and lay flat permanently, secure them with Hassall linoleum underlay drive screws. They are spiralthreaded and cement-coated for maximum holding power. Heads are flat countersunk type. Size: 11/4" x #3 ga. State quantity when writing for prices to:

JOHN HASSALL, INC. 186 Clay Street Brooklyn 22, N.Y. Established 1850 Hassall



ELECTRIC HEATERS and SHEPLER RH VENTILATING FANS

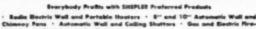
Here's a Completely New, Improved 8" Automatic Fan for Small Rooms

del No. 1 (8" Bustrated). Also duble in 10" size-Madel No. 81 · Quickly installed in ceiling, wall ar cabined · Designed for bothrooms, kitchenettes, powder rooms, etc.l

new, low cost 8" automatic fan, designed ically for small rooms of imited wall ise all istanded construction and mounts ontally or vertically. The powerfal, quiet, enclosed in motor and 8" Torringson lite assure long, trouble-free operations -blade assembly, sittedhed to the remov-

able grille, and plug-in connection simplifier cleaning. The No. 1 model has a rating of over 500 C.F.M. (free at delivery). This type fan is also available in the standard No. 81 Model with 10° blades, having a rating of 550 C.F.M. (free air delivery). Both mises feature double summaric shorters and weather-tight seal to prevent back drafts and sweating. . Approved by Linderwirter Laberateries:

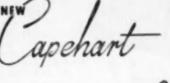
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place logs . Stationery and adjustable loovers. Write Dept. AB-1 for complete details











Converts Your Portable Electric Sow into a PRECISION PORTABLE RADIAL ARM SAW

The new Capehart Saw Gide fills the crying need for a top-quality, portable, precision "on the job" saw guide that does everything you can do with the big, unwieldy, high-priced radial arm saws-plus some things you can't do with them:

Cross-cuts ... bevol cross-cuts ... miltos ... bevel miltos ... rips .. bevel rips ... dodset "... ploughs", ... rebbets "... bevel rabbets" all floce operations, and more file new Capebort performs with speed, precision and ease. ("With proper cutting bead-also cuts stans, motal, composition, stc.)



Decker and Van Dure Bu, 19. Model 10-12-**543.00**: for 12" Skilsan (without ripping affactment) Model (IM-**549.00**: for Matl FIG[®] & Rip". IF YOUR BEALER GOES NOT STOCE - HAVE HIM ORDER FOR YOU TOBAT

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residential locks.



the town of White Rock, New Mexico (Los Alamos). That one has 489 ENGINEERED HOUSES designed for comfortable, individualistic living—at economical prices.



For instance, this is typical of 120 varied-size houses we delivered to Camp Mood, Killeen, Texas, Engineered Houses are not canned —they're fitted to your plan or ours. Pre-cut and panelized by mass-production methods for savings...big, small, gables, flattop—any style!



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DALLAS, TERAS

Early 1930 Douglas Fir Production Below 1949

The production of Douglas fir humber for the first quarter of 1950, despite heavy cutting during March, is 17 million feet below the output for the same period last year, according to H. V. Simpson, executive vice president of the West Coast Lumbermen's Association.

"We have not yet recovered from the crippling effects of the 'Paul Bunyan' winter of January and February," Simpson said. "Last year by this time, we had out 2,166,238,000 board feet. We will fall below 1948's record first quarter by 480 million feet.

"While some mills are still handicapped by lack of log supply," Simpson said, "the industry as a whole is pretty well back to normal operation." By the end of April most logging camps will have been opened, although late heavy snows have affected log supply in some areas."

The weekly average of West Coast humber production in March was 205,-817,000 hoard feet, or 126.3 per cent of the 1945-1949 average. Orders averaged 224,489,000 hoard feet, shipments to 18,105,000 hoard feet, Weekly averages for February were: production, 161,421,000 (99 per cent of the 1945-1949 average.) Orders were 201,507,-000, shipments 189,361,000.



FOURTH EDITION

SIMPLIFIED CARPENTRY ESTIMATING

By J. DOUGLAS WILSON

Coordinator, Apprentice Education, Corpentry and Cabines Making Los Angeles City Schools Los Angeles, California

and CLELL M. ROGERS

Mathematics Instructor, Venice High School, Venice, California

A practical text on carpentry estimating, covering rough lumber, finish lumber, finish lumber and hardware, in which the parts of a house are analyzed under six main divisions. Material lists, short eut



rules and tables supplement the text and guard against anything being overlooked in making up the final estimate. Valuable information is given for making labor time estimates.

While designed as a beginner's text the Fourth Edition is complete enough for the use of builders and lumber dealers. Simple arithmetical methods for accurate estimating, are given. Helpful tables that save much time in figuring and a full index make the book suitable for quick reference in the shop or on the job.

Contents

Estimating Fundamentals. Foundation Material, Framing, Exterior Finish, Interior Finish, Hardware, Building Information. Estimating Short Cuts. Labor Hours per Unit of Work. Carpentry mensuration, Mathematical Reference Tables. Stair Estimating. Index, 1948. 4th, 288 pages, 123 illustrations, 60 tables, 5x7, 83.00.

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Applications of THOROSEAL may be made over exterior surfaces of foundation walls as work progresses.



STANDARD DRY WALL PRODUCTS BOX X NEW EAGLE, PENNSYLVANIA YOU save meney with a Gilagn mizor right from the stort, for law initial cast - lawest an the market - is yours with this best-engineered mochine that is packed with quality construction features that you know mean added years of sorvice and preclision missing. Tay'll find on estru rugged all actes from, overland co.

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